EXHIBIT B

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1
                IN THE UNITED STATES DISTRICT COURT
 2
                FOR THE EASTERN DISTRICT OF TEXAS
 3
                          TEXARKANA DIVISION
   PANTECH CORPORATION AND
 4
                                  ) (
   PANTECH WIRELESS, LLC,
                                  ) (
                                        CIVIL ACTION NO.
                                        5:22-CV-69-RWS
 5
       PLAINTIFFS,
                                  ) (
                                  ) (
 6
  VS.
                                        TEXARKANA, TEXAS
                                  ) (
                                  ) (
7
   ONEPLUS TECHNOLOGY (SHENZHEN)) (
                                  ) ( OCTOBER 16, 2024
) ( 8:37 A.M.
   COMPANY LIMITED,
         DEFENDANT.
 8
 9
10
                        JURY TRIAL TRANSCRIPT
11
            BEFORE THE HONORABLE ROBERT W. SCHROEDER III
12
                    UNITED STATES DISTRICT JUDGE
13
   FOR THE PLAINTIFFS:
                            Mr. James A. (Tripp) Fussell, III
14
                            Ms. Tiffany A. Miller
15
                            Ms. Courtney Krawice
                            Mayer Brown, LLP
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24
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1	Mı	r. David M. Airan r. Wesley O. Mueller
2		r. Paul J. Filbin r. Christopher J. Gass
3	Mi	r. Michael J. Schubert
4	Le	r. James W. Sanner eydig Voit & Mayer, Ltd.
5		wo Prudential Plaza 80 North Stetson
6		uite 4900 hicago, IL 60601
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10		ashington, DC 20001
11		r. G. Blake Thompson
12		ann Tindel & Thompson 12 E. Line Street
13		uite 304 yler, TX 75702
14	-	•
		s. Shelly Holmes, CSR, TCRR
15	Ho	fficial Court Reporter onorable Robert W. Schroeder III
16		nited States District Judge astern District of Texas
17	Te	exarkana Division 00 North State Line Avenue
18	Te	exarkana, TX 75501
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20	(Proceedings recorded by	mechanical stenography, transcript
21	produced on a CAT system.)	
22		
23		
24		
25		

resolved correctly, in our view.

08:38:39

25

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08:38:44
          1
                      THE COURT: Okay.
          2
                      MR. FILBIN: So it's with respect to the
08:38:48
             uncertainty, the "adding the certainty premium." We're
08:38:49
          3
             still not in agreement as far as the final language that
          4
08:38:53
             Pantech is proposing to use in their slides.
          5
08:39:00
          6
                      THE COURT: Okay.
08:39:03
          7
                      MR. FILBIN: Is it okay if we give you a copy of
08:39:03
          8
             the --
08:39:09
                      THE COURT: Of course.
08:39:10
08:39:11
         10
                      MR. FILBIN: Thank you.
         11
                      So, Your Honor, Slide 2 is representative of the
08:39:24
         12
             first issue with respect to this "adding the premium"
08:39:28
             issue. The headline is the particular issue. Pantech
08:39:33
         13
             damages before adjusting for invalidity and infringement
         14
08:39:38
         15
             uncertainty discount. This is just another -- this is
08:39:41
             going to be the springboard for this unbounded
         16
08:39:46
             multiplier --
08:39:50
         17
         18
                      THE COURT:
                                   Sure.
08:39:51
                      MR. FILBIN: -- untethered to the facts. There's
         19
08:39:51
         20
             no number -- there's still no number from Pantech as far as
08:39:54
             what they're going to argue what this -- what this extra --
         21
08:39:58
         22
             removing the discount could possibly be. There's no
08:40:01
         23
                       This is really just another way to argue
08:40:05
08:40:07
         24
             willfulness, which is, again, in violation of the MIL.
                      You know, they've -- they keep splashing
         25
08:40:10
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infringement in front of the jury, and they're going to
08:40:13
          1
             argue that OnePlus is an infringer, and so, therefore,
08:40:15
          2
             punish them.
                            That same issue is in -- that same kind of
08:40:23
          3
             language is in Slides 2, 7, 8, and 27.
          4
08:40:24
                      THE COURT: Okay.
          5
08:40:33
                      MR. FILBIN: So we think it should be removed.
08:40:33
          6
          7
                      THE COURT: Is that --
08:40:33
          8
                      MR. FILBIN: That's one issue. I can keep going
08:40:40
             if you want to hear all the issues.
          9
08:40:45
                      THE COURT: May let's hear a response from
08:40:45
         10
         11
             Plaintiffs on that.
08:40:46
         12
                      MS. KRAWICE: Your Honor, I'm just going to note
08:40:47
             that this is the first time that we're hearing that there
08:40:50
         13
             isn't total agreement on this, but I'm going to address it
08:40:53
         14
         15
             ad hoc right now.
08:40:59
                      We sent them slides multiple times last night,
         16
08:41:00
             including this language. This language was changed. I
08:41:05
         17
             think this language may have been even included in a 3:00
         18
08:41:05
         19
             p.m. exchange yesterday.
08:41:10
08:41:11
         20
                      THE COURT: Which language are you talking about?
                      MS. KRAWICE: Sorry, Your Honor. On Slide 2, this
         21
08:41:13
         22
             Pantech damages before adjusting for invalidity and
08:41:14
         23
             infringement uncertainty discount.
08:41:15
08:41:17
         24
                      THE COURT: Well, they did raise the issue
08:41:20
         25
             yesterday.
```

08:41:21

08:41:24

08:41:28

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08:41:36

08:41:40

08:41:45

08:41:48

08:41:51

08:41:54

08:41:57

08:42:01

08:42:05

08:42:09

08:42:12

08:42:16

08:42:19

08:42:24

08:42:29

08:42:33

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MS. KRAWICE: Yes, Your Honor. We just have never heard back from them whether it was agreed or not. And this is the first time that we're hearing that they don't agree to this language, this specific language that was changed during your rulings yesterday.

But I just want to emphasize that this is being used, and the reason why there's no number on this slide about the uncertainty discount itself is because we are honoring Your Honor's previous ruling that the number provided by Dr. Putnam was struck.

He is not going to be putting a number to this uncertainty discount. He's going to be talking about it in a high level, the same way he did at the last trial, just discussing the fact that when you have pre-suit -- excuse me, when you have other licenses that were entered into prior to findings of infringement and validity, there's that natural uncertainty surrounding the validity and infringement of the patents that you're licensing.

That uncertainty doesn't exist after a finding of infringement and validity. There will be no number put forth specifically. That is why this slide is simply his base number of what the damages should be, and then he's offering the opinion of this is the minimum or the floor because this isn't accounting for those discounts, and that's directly in line with Your Honor's ruling.

08:42:48

08:42:50

08:42:54

08:42:58

08:43:02

08:43:05

08:43:08

08:43:14

08:43:21

08:43:24

08:43:27

08:43:31

08:43:32

08:43:34

08:43:38

08:43:38

08:43:40

08:43:43

08:43:47

08:43:52

08:43:56

08:44:00

08:44:02

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The discussion that we talked about yesterday as to what that value or what that number of the discount will be came from a different witness. That came from our fact witness yesterday, the base of that.

And if Your Honor would like us to, you know, enter into a discussion of previewing what that effect of that number would be that comes from Pantech's -- I believe its Rog Response 10 where we disclosed it prior, then Yang-Won came to the stand and talked about that exact same thing yesterday in front of the jury, but Dr. Putnam is not putting those numbers. He's simply saying that you can include an adjustment --

THE COURT: He's not saying you have to, and he's not saying what the number would be if you do; is that right?

MS. KRAWICE: Correct. And that's why this slide, this number, this SEP, NEP, and total, that's his base. That does not include any numbers from the discount. We previewed this number that's on this slide here, this 1.13 million to them last week. That's based on the stipulated bases, and then the application of Dr. Putnam's royalty rate, which were previously disclosed. That's where this number on this slide comes from.

THE COURT: So here's what I'm going to say. I think that the -- that the slide needs to be changed to

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something more neutral, unless he's going to give the
          1
08:44:12
             opinion that the jury should adjust a discount that he
08:44:19
          2
             gives an opinion for, which I don't think he's going to do.
08:44:26
          3
             I don't think that's been disclosed. That's not been any
08:44:29
             of the discussion that was yesterday.
08:44:31
          6
                      I think we should change this slide to remove all
08:44:33
          7
             of that information, and we'll deal with it on a
08:44:37
          8
             question-by-question basis.
08:44:41
                      MS. KRAWICE: Okay.
08:44:44
                      MR. FILBIN: Your Honor, just a clarification on
08:44:48
         10
         11
            that.
08:44:50
         12
                      THE COURT: My concern is that it -- the slide --
08:44:51
             based on what you're telling me, I think the slide itself
08:44:53
         13
         14
             is somewhat misleading.
08:44:56
         15
                      MR. FILBIN: Your Honor, I want to just focus on
08:44:58
             Slide 7, which is --
         16
08:45:02
         17
                      THE COURT: Okay. Let's go to Slide 7, because we
08:45:04
            haven't addressed it yet.
         18
08:45:06
                      MR. FILBIN: It's of a piece, but it's something
         19
08:45:07
         20
             Your Honor just said about Dr. Putnam should not be
08:45:10
             testifying that you have to increase. Slide 7 makes it
         21
08:45:13
             that that is what the jury must do, and that's -- Bullet 5
         22
08:45:17
         23
            must be deleted.
08:45:22
         24
                      THE COURT: All right. Ms. Krawice --
08:45:23
         25
                      MR. FILBIN: I'm sorry, it's Slide 8.
08:45:26
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THE COURT: It's 8 or 7?
08:45:29
          1
          2
                      MR. FILBIN: It's the one displayed on your
08:45:31
08:45:34
          3
             screen, Your Honor.
                      THE COURT: All right. Ms. Krawice?
          4
08:45:35
                      MS. KRAWICE: All right. I think we're talking
          5
08:45:37
             about Slide 7. Correct, Your Honor?
08:45:42
          6
          7
                      THE COURT: I think we are.
08:45:44
          8
                      MS. KRAWICE: Okay. So I assume that -- I want to
08:45:45
             emphasize that this is just a flow of how Dr. Putnam deems
          9
08:45:50
             the process of calculating damages should go. This final
08:45:54
         10
             bullet point here is the last point where he doesn't say
         11
08:45:58
         12
             you must. That doesn't say -- there's no word that says
08:46:02
             "must."
08:46:07
         13
                      He says that you can adjust upward to account for
08:46:07
         14
         15
             the fact that there are discounts regarding the uncertainty
08:46:10
             for invalidity and infringement that existed in the prior
         16
08:46:12
             licenses. He's not going to say "must." It's that once
08:46:16
         17
             you get to this step, that discount no longer applies in
         18
08:46:19
         19
             this analysis.
08:46:23
         20
                      THE COURT: Well, it says "make." Could we change
08:46:24
             it to "may make" or "can make" or "consider making"?
         21
08:46:30
         22
                      MS. KRAWICE: If that would be okay with -- we're
08:46:33
         23
             okay with that, Your Honor.
08:46:35
         24
                      THE COURT: Mr. Filbin?
08:46:36
         25
                      MR. FILBIN: Your Honor, I don't know if that
08:46:37
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subtlety is going to be appreciated by the jury once you
          1
08:46:44
             show this operation of you go through these five steps. I
08:46:47
             don't know that anyone is going to fully appreciate --
08:46:50
          3
                      THE COURT: Well, that's why it's going to be
          4
08:46:52
             really important for your cross to be effective,
08:46:54
          6
            Mr. Filbin.
08:46:57
          7
                      MR. FILBIN: Thank you. I agree. I agree.
08:46:57
                      All right. This is something that he can say, but
          8
08:46:59
            I don't think it should be part of his --
         9
08:47:04
                      THE COURT: I agree, and I've asked Ms. Krawice to
08:47:07
         10
         11
             change it to make it -- you know, "may make," "consider
08:47:09
         12
            making."
08:47:14
08:47:14
         13
                      MR. FILBIN: Okay. Your Honor.
                      THE COURT: "Could make." It's just a
08:47:15
         14
         15
             demonstrative.
08:47:17
                      MS. KRAWICE: "Can make."
08:47:18
         16
                      THE COURT: "Can make."
08:47:20
         17
                      MR. FILBIN: Okay. Thank you, Your Honor.
         18
08:47:22
                      So the second issue is Slide 22 -- 23, it must be.
         19
08:47:23
         20
             I'm sorry, Slide 29.
08:47:33
                      THE COURT: Mr. Filbin?
         21
08:47:35
         22
                      MR. FILBIN: It's the one with the pie chart.
08:47:37
         23
             It's not 22. It's the pie chart. Thank you.
08:47:46
08:48:04
         24
                      I have it up there now, Your Honor. So the issue
             is with respect to the 29 in the orange section.
08:48:13
         25
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is -- again, this is the -- with Mr. Jung's concept of
          1
08:48:20
             the -- there were a certain group of patents, and then
08:48:24
          2
             there are -- then they bought more, and they're going to
08:48:27
          3
             increase based on this issue -- or the fact that the pie is
08:48:29
             now bigger.
          5
08:48:33
                      That was not part of Dr. Putnam's analysis when he
08:48:34
          6
          7
             did his apportionment. When he looked at apportionment, he
08:48:38
             looked at 22 families. So this chart is inconsistent with
          8
08:48:41
             how he actually made the apportionment analysis.
08:48:45
                      So we would be okay if it just simply said "other
08:48:49
         10
         11
             SEPs" and didn't give the number. This is a way to
08:48:53
         12
             backdoor in facts that -- through -- through this expert in
08:48:55
08:49:00
         13
             order to get a new -- new multiplier.
                      MS. MILLER: Good morning, Your Honor.
         14
08:49:06
         15
                      THE COURT: Good morning.
08:49:09
         16
                      MS. MILLER: First, this was an objection raised
08:49:09
             on Monday night, and he chose not to argue it yesterday.
08:49:13
         17
             So we thought they had dropped the objection.
         18
08:49:16
                      Second, I am surprised by his statement. At the
         19
08:49:18
         20
             deposition of Dr. Putnam, Mr. Filbin himself asked: So to
08:49:25
         21
             understand this, then, you're saying that the three patent
08:49:29
         22
             families that you list in Exhibit 12, those are three of
08:49:32
         23
             the 32 families that you identified in Putnam Exhibit 1.
08:49:36
         24
             Is that correct?
08:49:39
         25
                      Yes.
08:49:39
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So 29 plus 3 is 32. So he's aware of the number
          1
08:49:40
            being 29. So I don't know what he's saying now for the 22
08:49:46
          2
             or how this is a new fact.
08:49:51
          3
                      THE COURT: Mr. Filbin?
          4
08:49:53
                      MR. FILBIN: Dr. Putnam explained he had 32, and
          5
08:49:54
             he reduced that set down to the 4G. So he wound up with
08:50:00
          6
          7
             22.
                  So when he did the actual calculation, he was at 22.
08:50:05
          8
                      THE COURT:
                                   Okay.
08:50:13
          9
                      MR. FILBIN: Okay?
08:50:13
                      THE COURT: I'm not sure I follow.
08:50:14
         10
         11
                      MR. FILBIN: So when he did his actual calculation
08:50:18
             to get to 21 and 79, he wasn't using 3 and -- 3 and 29, he
         12
08:50:21
             was using a set of 22. So he didn't -- so ordinarily this
08:50:26
         13
             would be just something you'd address on cross, except for
08:50:32
         14
         15
             the concern that they're going to use these facts as their
08:50:35
             multiplier.
         16
08:50:40
                      THE COURT: Okay. Well, I'm going to let you
08:50:40
         17
         18
             address that on cross.
08:50:42
                      MR. FILBIN: Okay. The third issue is we were
         19
08:50:43
         20
             informed that Mr. Tidwell plans to display exhibits from
08:50:45
             Dr. Putnam's report during direct testimony that weren't
         21
08:50:50
         22
             disclosed to us according to the pretrial order.
08:50:53
         23
                      THE COURT: All right. Well, then --
08:50:55
         24
                      MR. FILBIN: And so we think that's improper.
08:50:57
         25
08:50:59
                      THE COURT: When -- when that happens, if they try
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to do that, you can object and I'll hear from the parties,
08:51:02
         1
            unless, Mr. Tidwell, you're prepared to address it now.
08:51:05
          2
                      MR. TIDWELL: Your Honor, it's an issue of just
08:51:09
          3
             late in the evening. I -- they're exhibits. They're part
08:51:17
          4
             of his report. I probably can get by without them. If I
08:51:23
             need to, I'll address the Court so they know what I'm
08:51:28
         7
             doing.
08:51:31
                      THE COURT: Fair enough.
         8
08:51:32
         9
                      All right. What else?
08:51:36
                      MR. AIRAN: Just one housekeeping matter,
08:51:38
         10
         11
             Your Honor. At the end of Plaintiffs' close -- the close
08:51:41
             of their case-in-chief, we expect to make a Rule 50 motion.
         12
08:51:45
             Obviously, we don't want to do that in the presence of the
08:51:49
         13
08:51:51
         14
             jury.
         15
                      I don't know how that's going to line up. I'm
08:51:52
             expecting -- it looks like we have some deposition
         16
08:51:53
             testimony this morning. We have Dr. -- Mr. Mauro and then
08:51:56
         17
             Dr. Putnam, I think, will complete their case-in-chief.
         18
08:52:00
         19
             And, at that time, we would like to present our Rule 50
08:52:03
         20
            motions.
08:52:06
                      THE COURT: Sure. Do you intend to -- do you
         21
08:52:06
         22
             intend to make it orally, or do you intend to file
08:52:15
         23
             something?
08:52:19
08:52:19
         24
                      MR. AIRAN: We can do whatever your preference is.
            My colleague is going to be handling that.
08:52:21
         25
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THE COURT: I don't have a preference. I just --
08:52:25
          1
          2
             I would rather you do one or the other.
08:52:27
                      MR. AIRAN: Do you have a preference?
08:52:30
          3
                      MR. COLLINS: One second.
          4
08:52:34
                      MR. AIRAN: So there's an instruction that we're
          5
08:52:53
             going to ask for. We'll do that orally at the close of
08:52:55
          6
             their case-in-chief. And then we'll file a 50.
          7
08:52:58
                      THE COURT: Okay. And I mean, I'm certainly open
          8
08:53:01
             to a brief summary of what's filed on the docket. But I
08:53:02
             just -- I think it works better to do one or the other --
08:53:06
         10
             make a short oral motion and file something on the docket
08:53:10
         11
             if you want to do it that way.
         12
08:53:16
                      MR. AIRAN: Sure.
08:53:18
         13
         14
                      THE COURT: Okay. Good.
08:53:24
         15
                      MR. AIRAN: Thank you, Your Honor.
08:53:25
                      THE COURT: So we still do have these objections
         16
08:53:25
             to the Lopez demonstratives that we need to address if
08:53:27
         17
             we -- I mean, we can do that for a few minutes.
         18
08:53:31
         19
                      MS. KRAWICE: Your Honor, I am ready to address
08:53:35
         20
             those right now if you want --
08:53:47
                      THE COURT: Excellent.
         21
08:53:50
         22
                      MS. KRAWICE: Great. A couple of these have been
08:53:51
         23
             streamlined based on some agreements we reached. I'll
08:53:53
         24
            mention them as we reach them because I think that's most
08:53:56
         25
            effective.
08:53:59
```

08:54:00	1	But as a general point for the ones that remain,
08:54:00	2	I'd just like to flag upfront that there are instances
08:54:05	3	where, you know, we have raised objections and we even note
08:54:07	4	that there are opinions in Dr. Lopez's report that go to
08:54:11	5	one or the other or one subset of info on the slides, but
08:54:17	6	our real objections and I want to just frame these is
08:54:21	7	that it's the comparisons that are made in the slides about
08:54:25	8	facts that are not found in Dr. Lopez's report.
08:54:27	9	So that leads us right into the first slide that
08:54:32	10	we've objected to. And, Your Honor, I have a copy of their
08:54:35	11	updated one. Would you like that?
08:54:37	12	THE COURT: Yeah, that would be helpful.
08:54:39	13	MS. KRAWICE: All right. So the first slide at
08:54:48	14	issue is Slide 4, and this is going directly to what I kind
08:54:52	15	of previewed before. There are bits and pieces of this
08:54:57	16	slide that Dr. Lopez has put in his report, you know,
08:55:02	17	specifically about phones using certain functionalities.
08:55:07	18	However, what this slide does that we believe is beyond the
08:55:11	19	opinions that he offered is tying it directly to OnePlus.
08:55:14	20	And we did offer a compromise of we would not
08:55:17	21	object to this slide if they made it broader and followed
08:55:20	22	the wording in the report as mentioned in Paragraphs 38,
08:55:24	23	222, and 247. However, those opinions about specific
08:55:30	24	functionalities was never tied to OnePlus phones.
08:55:35	25	They say in a separate paragraph that like most

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smartphones and tablets, OnePlus's accused products include
         1
08:55:39
             a multiple -- a multitude of feature -- features customers'
          2
08:55:42
             value. That's not thousands as listed on this slide. And
08:55:47
          3
             the general tying nature of specific features was not made
08:55:50
            by Dr. Lopez. So that is the basis of our objection on
          5
08:55:55
             this slide.
08:55:58
          6
          7
                      MR. THOMPSON: Good morning, Your Honor.
08:56:03
                      THE COURT: Good morning.
          8
08:56:06
                      MR. THOMPSON:
                                     This is basically -- I mean, as you
          9
08:56:06
             can sort of see looking at it -- I mean, it's just -- it's
08:56:09
        10
        11
             just an effort to show that OnePlus's phones have many
08:56:12
             features, like any other smartphone.
        12
08:56:15
08:56:17
        13
                      Ms. Krawice just read one part of Dr. Lopez's
             report saying that OnePlus's products have a multitude of
        14
08:56:21
        15
             features. That's what we're trying to get at here. If the
08:56:26
             question is thousands of features versus many -- I don't
        16
08:56:28
             know what the -- I don't know one term is better than the
08:56:31
        17
             other, but the point of this slide is just to show that
        18
08:56:33
             there's -- you know, like every other smartphone on the
        19
08:56:36
        20
             market, they have a lot of features. And I don't really
08:56:38
             see anything improper about that, Your Honor.
         21
08:56:43
         22
                      THE COURT: Ms. Krawice, does the report -- does
08:56:44
         23
             the report not use the phrase "thousands and tens of
08:56:49
         24
             thousands of other patented features"?
08:56:54
         25
                     MS. KRAWICE: No, Your Honor.
08:56:57
```

```
THE COURT: It does not?
08:56:57
          1
          2
                      MS. KRAWICE: It says many, or it makes other
08:56:58
             statements. What we're really seeking here in a bunch of
08:57:00
          3
             these slides is to be more accurate to what's in his
          4
08:57:02
          5
             report.
08:57:07
          6
                      THE COURT: Okay.
08:57:07
          7
                      MR. THOMPSON: Your Honor, in Paragraph 36 of
08:57:09
             Dr. Lopez's report, he says thousands of patented
          8
08:57:15
          9
             technologies are in these phones. So, I mean, I'm not
08:57:18
08:57:24
         10
             sure...
         11
                      THE COURT: Ms. Krawice?
08:57:25
         12
                      MR. THOMPSON: It seems like it's
08:57:27
08:57:28
         13
             cross-examination.
                      MS. KRAWICE: Your Honor, it's tying it to OnePlus
08:57:29
         14
             and saying that the number of features in OnePlus's phones
         15
08:57:30
             are in the thousands. We're just seeking to be more
         16
08:57:32
             accurate to what's in the report.
08:57:35
         17
                      THE COURT: I'm going to overrule the objection.
         18
08:57:36
             I think -- I don't think it's something that's hugely
         19
08:57:38
         20
             objectionable. I think it's -- you can cross him on it if
08:57:47
         21
             you want to.
08:57:50
         22
                      MS. KRAWICE: Okay. The very next slide is where
08:57:51
         23
             the parties have other disputes.
08:57:54
         24
                      THE COURT: This is the slide with the two green
08:57:58
         25
            bars?
08:58:00
```

MS. KRAWICE: Correct, Your Honor. 08:58:01 1 2 THE COURT: Okay. 08:58:01 MS. KRAWICE: So there were agreements made this 08:58:02 3 morning where a lot of our objections to this slide were 08:58:03 4 removed. However, one remains particularly as to this bar. 5 08:58:06 6 Dr. Lopez does not draw a specific comparison in 08:58:10 his report between the total standard patents and Pantech's 7 08:58:14 asserted SEPs. Rather, the discussion is about the number 8 08:58:19 of total SEPs was part and parcel of his discussion of 08:58:25 considerations for calculating reasonable royalty for 08:58:29 10 11 complex devices, and now there's this line on this slide 08:58:32 12 making a direct comparison to Pantech, and that comparison 08:58:36 is not in his report. 08:58:41 13 THE COURT: Let me hear from the Defendant. 14 08:58:41 MR. THOMPSON: Your Honor, I don't think there's 15 08:58:43 any dispute that Dr. Lopez discusses these -- that there 16 08:58:48 are multiple families. So I'm not really understanding 08:58:55 17 18 what the -- what the -- I mean, if she doesn't like the 08:58:58 comparison, it seems like that's proper for 19 08:59:02 cross-examination. But there's not a -- I mean, he 20 08:59:04 21 discusses the various families, and so I'm not sure, you 08:59:07 22 know, comparing that from Pantech --08:59:11 23 THE COURT: I'm going to -- I'm going to sustain 08:59:12 24 her objection. I think it is misleading. 08:59:14 25 MR. THOMPSON: 08:59:16 Okay.

```
THE COURT: I mean, I -- it seems to compare the
08:59:21
          1
             number of SEPs to the patents -- the asserted patents. I
08:59:24
          2
             think you can make the argument you want to make during,
08:59:32
          3
             you know, in argument.
08:59:37
                      But I'll sustain that objection.
          5
08:59:37
                      MS. KRAWICE: Thank you, Your Honor.
08:59:39
          6
          7
                      For the sake of housekeeping, the next objection
08:59:44
             was to Slide 8. However, that one has been resolved.
          8
08:59:47
          9
                      THE COURT: All right.
08:59:50
                      MS. KRAWICE: So we can move right along to Slide
08:59:51
         10
         11
             13 and 27 -- or 26.
08:59:56
         12
                      Oh, the numbers should still be the same, I
08:59:58
             believe, in that one that you're holding, Your Honor,
09:00:01
         13
             Slide 13 and 26.
09:00:04
         14
         15
                      THE COURT: Okay.
09:00:05
                      MS. KRAWICE: I believe they're nearly identical.
         16
09:00:05
09:00:08
         17
                      THE COURT: Okay.
                      MS. KRAWICE: So I'm going to try to be as clear
         18
09:00:09
             as I can because this does get a little confusingly in the
         19
09:00:15
09:00:19
         20
             weeds.
                      The argument that's being made is about these
         21
09:00:19
         22
             numbers, that $90,000 that you see on that slide and these
09:00:23
         23
             conclusions that Dr. Lopez has now drawn for the first
09:00:27
09:00:31
         24
             time.
         25
                      Their argument is that this is a goose/gander
09:00:32
```

09:00:37

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09:00:45

09:00:47

09:00:51

09:00:55

09:00:58

09:01:01

09:01:03

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situation because this is based on the new stipulated base sales for each patent.

However, there's a really big distinction that's important between what Dr. Putnam did and what we actually in good faith previewed to them last week in an email discussion and what Dr. Lopez is now doing for the first time here that they just alerted us to for the first time last night when we saw these slides.

So awhile ago, Dr. Lopez's apportionment was stricken, and he wasn't allowed to provide a final number. They're now seeking to use the stipulation to circumvent that decision and just take the base sales, multiply it by the number for the royalty rate that he provides in his report, extracted from the Apple/Samsung agreements that he believes are comparable, and then come to this new final number. But that basis of the royalty base was struck from Dr. Lopez's report.

Conversely, Dr. Putnam did provide his calculation of apportionment so that when the parties entered into the stipulation, he had a one-to-one switching in his formula where Dr. Putnam did provide his account -- his calculation of the apportioned sales bases.

He can just swap that for the number that the parties then agreed to, to kind of streamline his analysis so he could skip a step that he put in his report. And

09:02:16	1	then he applied his rates, I'm talking about Dr. Putnam,
09:02:20	2	Dr. Putnam can do a one-for-one of switching with the
09:02:24	3	stipulated number with what he deemed the apportioned
09:02:27	4	number which came out last time at trial.
09:02:29	5	Dr. Lopez does not have an apportioned number that
09:02:33	6	remains in this case, and now they're using this these
09:02:38	7	bases to circumvent that flaw.
09:02:41	8	In the same way that Dr. Putnam isn't allowed to
09:02:44	9	go past his general overview of a multiplier to offer a
09:02:48	10	number now here, and we don't intend to do that, the same
09:02:51	11	should apply to Dr. Lopez, should not be allowed to do new
09:02:56	12	math for the first time where we just learned that he's now
09:03:00	13	going to say \$90,000, for the first time last night.
09:03:04	14	THE COURT: All right.
09:03:06	15	MR. THOMPSON: I mean, Your Honor, as I understand
09:03:10	16	this, I mean, I don't think there's any dispute that this
09:03:14	17	is Dr. Lopez's royalty rate he calculated, and all he's
09:03:19	18	done is multiply this by the IDC sales data that we
09:03:22	19	stipulated to. That's what Dr. Putnam did. That's what
09:03:25	20	he's doing. So it's just math. I'm not sure I don't
09:03:29	21	understand I guess exactly what the dispute is.
09:03:31	22	But we stipulated to the sales data. He has a
09:03:34	23	royalty rate. He just multiplied by it and made a total.
09:03:37	24	THE COURT: I think her objection is that it's a
09:03:39	25	new opinion that's never been disclosed before.

```
MR. THOMPSON: This is his methodology just
09:03:43
          1
          2
            applied to the new IDC sales data. That's all.
09:03:45
09:03:48
                      THE COURT: All right. And so address why it's
          3
          4
             not a new opinion --
09:03:51
                      MR. THOMPSON: Well, it's not a new opinion --
          5
09:03:52
                      THE COURT: -- that's not been disclosed.
09:03:55
          6
          7
                      MR. THOMPSON: Are you talking about the number
09:03:58
             itself?
          8
09:03:59
09:03:59
          9
                      THE COURT: Correct.
                      MR. THOMPSON: Well, because it's just like
09:04:01
         10
         11
             Dr. Putnam's number, it's math. His number wasn't
09:04:02
         12
             disclosed either.
09:04:05
                      THE COURT: So you're saying OnePlus is doing the
09:04:06
         13
             same thing it agreed Pantech could do?
09:04:08
         14
         15
                      MR. THOMPSON: It's math. Yes, it's just taking
09:04:12
            his methodology times the sales data.
         16
09:04:14
         17
                      THE COURT: All right. Can you direct me to a
09:04:17
             paragraph or a page reference in the report where it's
         18
09:04:20
             disclosed?
         19
09:04:23
09:04:54
         20
                      I'll tell you what, you all go ahead and look at
         21
             it. I think all of our jurors are here. We'll go ahead
09:04:57
         22
             and start, and we'll take this up at the morning break.
09:04:59
         23
                      MR. THOMPSON: Thank you.
09:05:04
09:05:05
         24
                      THE COURT: Is there anything that must be -- that
            we've not discussed that needs to be raised before we begin
09:05:09
         25
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with the jury this morning?
09:05:12
          1
                      MR. FUSSELL: Your Honor, just as it relates to
          2
09:05:14
09:05:16
             another housekeeping matter. We intend to make a proffer
          3
             of the evidence that's been excluded. We can do that
          4
09:05:20
             similarly with a filing on the record, if that's cleaner
          5
09:05:23
             for you.
09:05:26
          6
          7
                      THE COURT: I have no objection to that.
09:05:27
                      MR. FUSSELL: Thank you, Your Honor.
          8
09:05:28
          9
                      THE COURT: Does the Defendant have any objection
09:05:29
             to handling the offer of proof that way?
09:05:30
         10
         11
                      MR. THOMPSON: (Shakes head no.)
09:05:33
         12
                      THE COURT: That will be fine, Mr. Fussell.
09:05:43
09:05:47
         13
                      All right. Anything else?
                      Let's have the jury brought down.
         14
09:05:47
         15
                      COURT SECURITY OFFICER: Please rise for the jury.
09:05:50
                      (Jury in.)
         16
09:06:09
                      THE COURT: Please be seated.
09:06:10
         17
                      Ladies and gentlemen of the jury, good morning and
         18
09:06:31
             welcome back. I hope you all had a pleasant evening.
         19
09:06:36
         20
             Thanks for being here on time so that we could start
09:06:40
         21
             promptly.
09:06:45
         22
                      At this time, the Plaintiffs may call their next
09:06:45
         23
             witness.
09:06:48
         24
                      MS. KRAWICE: Yes, Your Honor. Plaintiffs call
09:06:48
             Mr. Charles Mauro.
09:06:58
         25
```

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09:07:09
          1
                       (Witness sworn.)
          2
                      THE COURT: You can have a seat on the witness
09:07:20
                      The chair won't move, but once you get settled, you
09:07:21
          3
             stand.
          4
             can pull that microphone toward you.
09:07:26
                      THE WITNESS:
          5
                                      Thank you, sir.
09:07:27
                      MS. KRAWICE: May I proceed?
09:07:42
          6
          7
                      THE COURT: You may.
09:07:43
          8
                       CHARLES MAURO, PLAINTIFFS' WITNESS, SWORN
09:07:44
09:07:44
          9
                                    DIRECT EXAMINATION
09:07:44
             BY MS. KRAWICE:
09:07:45
         10
         11
                Good morning. Can you please introduce yourself to the
09:07:45
         12
             jury?
09:07:47
09:07:47
         13
                Yes. Pardon me. My name is Charles Mauro.
                 Mr. Mauro, what do you do for a living?
         14
09:07:52
         15
                        I'm president and founder of Mauro Usability
09:07:56
                 Yes.
             Science, a consulting firm based in New York. We offer
         16
09:08:00
             consulting services -- excuse me -- to clients in the field
09:08:04
         17
             of human factors engineering science. I have over 50 years
         18
09:08:09
         19
             of experience.
09:08:14
09:08:15
         20
                      I'm a research consultant to many leading
         21
             corporations. I've managed over 3,000 research programs.
09:08:19
         22
             I'm an invited lecturer at many leading academic
09:08:22
         23
             institutions, including MIT, and have spoken at Government
09:08:28
09:08:31
         24
             agencies, NASA and FDA, and I'm a recipient of many leading
         25
             research awards in the field of human factors engineering.
09:08:35
```

09:08:37	1	And I do personally hold important patents in the
09:08:41	2	field of graphical user interface design, which is the
09:08:44	3	subject matter of the '654 patent.
09:08:46	4	Q. Mr. Mauro, before we go any further, there is a
09:08:50	5	plethora, I think, of water on the stand. Please feel free
09:08:54	6	to use some of it if you need to.
09:08:59	7	A. Thank you. Sorry about that.
09:09:00	8	Q. You mentioned that your field is called human factors
09:09:04	9	engineering. Can you describe what that is, to the jury?
09:09:07	10	A. Sure. Human factors engineering is an actual formal
09:09:13	11	educational discipline. Many universities offer either a
09:09:18	12	master's or Ph.D. in human factors engineering.
09:09:21	13	And it's basically the study of the human mind and
09:09:24	14	body, both from a physiological and neuroscience point of
09:09:27	15	view, and utilizing that understanding to design technology
09:09:32	16	to be easy to use and safe. So there are human factors
09:09:39	17	engineers on many projects today.
09:09:42	18	Q. Can you describe some of the projects in human factors
09:09:45	19	engineering that you've personally handled?
09:09:48	20	A. Sure. Well, I personally managed many, many projects
09:09:52	21	over my career. A typical project would be excuse me
09:09:56	22	the design of operator cabs, for example, for John Deere
09:10:01	23	tractors or International Harvester.
09:10:03	24	For NASA, I designed a master control room for the
09:10:07	25	space shuttle. I've done many, many projects, even in the

consumer space. For example, looking at why cell phones 09:10:10 1 happen to be addictive, studies of that nature. 09:10:13 2 I've also worked directly for all of the four 09:10:17 3 major manufacturers of smartphones, Apple, Samsung, Google, 09:10:21 4 Motorola, and Huawei. 5 09:10:26 6 MS. KRAWICE: Your Honor, at this time, we'd 09:10:30 proffer Mr. Mauro as an expert in the field of mobile 7 09:10:31 devices and their user interfaces, which is relevant to the 8 09:10:35 '654 patent. 9 09:10:40 MR. AIRAN: No objection, Your Honor. 09:10:40 10 11 THE COURT: Very well. 09:10:41 (By Ms. Krawice) Mr. Mauro, what were you asked to do 12 Q. 09:10:42 in this case? 09:10:44 13 Specifically, I was asked to examine the '654 patent 09:10:44 14 15 and discuss the problem solved by that patent, to help the 09:10:49 jury understand what the innovations are that are present 16 09:10:53 that are beneficial in that patent. 09:10:57 17 Q. Can you introduce the '654 patent to the jury? 18 09:10:58 19 The name of this patent is: Terminal Apparatus 09:11:01 Sure. 09:11:09 20 and Method For Supporting Smart Touch Operation. 21 It was issued -- the invention itself came into 09:11:12 22 being in September 9th, 2011. And this is a patent 09:11:15 23 basically optimized around the idea that on a smartphone, 09:11:18 09:11:23 24 which has a very small screen, this technology in this 09:11:28 patent or these asserted claims, if you will, make it 25

possible for different hand sizes, different finger sizes 09:11:31 1 to make selections with a reduced error. 09:11:35 So prior to the smartphone, when we had other 09:11:37 3 types of handheld devices, I was very active in the 09:11:40 4 development of those systems. You had to have a very small 09:11:44 finger or you had to have a stylist in order to make 09:11:48 selections -- to make the selections accurate. 7 09:11:52 And what this patent does essentially is it allows 8 09:11:54 a region of selection by the finger, and it helps you --9 09:11:57 the machine helps you select the proper input and then 09:12:01 10 reduces the corresponding error rate. The invention also 09:12:05 11 pops up a display, and then has a timeout feature as well. 09:12:10 12 Q. At a high level, can you describe the invention of the 09:12:14 13 '654 patent? 09:12:18 14 A. Sure. This is taken essentially from the patent. This 15 09:12:18 patent starts with the premise that users make imprecise 16 09:12:23 user touch actions, which we know from a very large body of 09:12:28 17 human factor science is quite accurate. 18 09:12:31 19 This patent identifies an area overlapped by the 09:12:35 20 touch. It then generates objects in a new area based away 09:12:39 from the touch. So the object brought up is never left 21 09:12:46 22 under the object itself that you selected, so it increases 09:12:48 23 your ability to see the object. 09:12:52 24 And once the object is displayed if it's selected, 09:12:54 then it performs an operation with respect to the object. 09:12:57 25

09:13:02	1	And if the time certain amount of time proceeds
09:13:06	2	without selection of the object, then the pop-up is
09:13:09	3	removed. So it leaves you back in your original state, and
09:13:13	4	it eliminates the need for a backup function that is common
09:13:18	5	in some types of user interfaces of these devices.
09:13:20	6	Q. What field of art does the '654 patent apply to?
09:13:25	7	A. Yeah, the '654 is applies to the field of art known
09:13:31	8	in in my field and in general at the USPTO where these
09:13:36	9	patents are issued as graphical user interface.
09:13:39	10	Q. Can you describe what a graphical user interface is, to
09:13:41	11	the jury?
09:13:42	12	A. Sure. Yeah, very simply, the way computers started
09:13:46	13	out, maybe some of you remember this, you had to type
09:13:50	14	commands into a computer, and this was basically the way
09:13:53	15	that they worked for many years.
09:13:55	16	Then in the 1980s, an individual by the name of
09:14:02	17	Douglas Engelbart invented what is called the graphical
09:14:06	18	user interface, and the keyboard was replaced by the mouse.
09:14:09	19	So you gripped a mouse, and then you can select
09:14:13	20	various features of, you know, whatever action it is you
09:14:16	21	want to have, drag or drop or click or print, and this was
09:14:19	22	a massive change whereas some feel was probably one of the
09:14:25	23	most important inventions of the last 50 years because it
09:14:28	24	gave access to literally billions of users where before the
09:14:32	25	computer was very small in terms of its access.

09:14:34	1	So what this patent, the '654, about is the next
09:14:40	2	generation after the desktop GUI which is the mobile GUI
09:14:41	3	which is based it replaces the mouse, if you will.
09:14:45	4	Simple way to think of it, replaces all of those mouse
09:14:48	5	functions with finger actions.
09:14:50	6	And in this transition, was, you know, some
09:14:54	7	interesting issues. I'm sorry.
09:14:56	8	Q. What was the state of the art for smartphone graphical
09:15:02	9	user interfaces in 2011?
09:15:03	10	A. Yeah. Some of you may remember the conventional flip
09:15:07	11	phones which were the precursors to the smartphone. And
09:15:10	12	this chart, the orange bars are the sale of conventional
09:15:14	13	flip phones, and the purple bars are the sale of modern
09:15:20	14	smartphones, single surface glass smartphones.
09:15:23	15	And indicated in the gray box here in 2011, this
09:15:25	16	is the period of the invention. And this particular
09:15:29	17	patent, the '654, is right at the nexus where they were
09:15:32	18	transitioning from this from the flip phone or the old
09:15:36	19	traditional phones to the modern smartphones. So it was
09:15:39	20	positioned perfectly in the transition time period.
09:15:43	21	Q. Did this transition period create any problems for GUI
09:15:48	22	designers?
09:15:49	23	A. Yes, it did. I was very active in the field at this
09:15:53	24	point working on various types of user interfaces, almost
09:15:56	25	all of them mobile, and we knew that the development of a

```
smartphone of this configuration with a glass screen was
09:16:00
          1
             going to lead to certain difficult problems in GUI design,
09:16:04
09:16:09
             how to accommodate certain user behaviors, and there was
          3
             also new business requirements that the carriers were
09:16:13
             pulling forward that had to be met in order to increase the
09:16:16
             profitability of these devices.
09:16:20
          7
             Q. Mr. Mauro, before we go any further, I just want to
09:16:22
             slow down a bit and ask where did this list of nine factors
          8
09:16:26
             come from?
09:16:29
             A. Yes. Thank you.
09:16:29
         10
         11
                      As a licensed human factors engineering
09:16:31
             professional, when I proffer information for clients or in
         12
09:16:37
09:16:40
         13
             a manner like this, it's important to always have base
             peer-reviewed literature on which to refer.
09:16:45
         14
         15
                      So these variables were culled from my personal
09:16:47
             experience based on the peer-reviewed literature.
         16
09:16:52
             Underlying each one of these specific elements here is
09:16:55
         17
             human factors research science.
         18
09:17:00
                      So it's a compilation of my examination of the
         19
09:17:02
         20
09:17:06
             literature and my personal experience in terms of
             organizing the list.
         21
09:17:09
         22
             Q. Did the invention of the '654 patent help solve any of
09:17:11
         23
             these nine problems?
09:17:17
09:17:18
         24
             A. Oh, in a major way. It's important to think about the
         25
             '654 as a --
09:17:23
```

09:17:25	1	Q. Mr. Mauro, I hate to interrupt, but please, you can
09:17:29	2	slow down and take a sip of water.
09:17:33	3	A. Excuse me. I'm over a cold, but not completely over
09:17:36	4	the cough there.
09:17:39	5	Okay. So the way to think about the '654
09:17:42	6	basically is as follows: It's a number of claims, and each
09:17:47	7	of these claims are grouped together as a process. So this
09:17:54	8	is a way of enhancing the functionality of mobile
09:18:00	9	smartphones by addressing the problem of small screen size
09:18:05	10	versus finger, hand size.
09:18:08	11	This problem of small target size and low
09:18:12	12	tolerance to errors and spacing of objects and the smooth
09:18:15	13	screen.
09:18:15	14	If you had an old cell phone before, you realize
09:18:19	15	you always had physical buttons, and you knew when you
09:18:21	16	pushed the button, an action had taken place. But in this
09:18:24	17	environment, with the new phones, that wasn't possible.
09:18:27	18	So you probably notice that these first three
09:18:29	19	elements here under GUI design problems, those are all
09:18:33	20	related to the size of both the human finger and the
09:18:38	21	spacing and size of objects on the screen.
09:18:39	22	And what the '654 patent does essentially is it
09:18:42	23	by allowing you to select a region instead of the exact
09:18:46	24	target itself, it gives you a reduction in the error rate
09:18:50	25	with respect to making selections.

09:18:53	1	And what is particularly important is in the
09:18:55	2	design of the user interface for the modern smartphone, we
09:18:59	3	for the very first time were faced with the problem of
09:19:03	4	differences in finger size. That is not the case when
09:19:06	5	you when you use a mouse. For example, any hand size
09:19:10	6	can operate a mouse.
09:19:11	7	So that what we realized very quickly was that
09:19:14	8	a small woman has a very small finger obviously, and a
09:19:19	9	large male has a very large finger. This turned out to be
09:19:23	10	an extremely limiting problem in trying to figure out how
09:19:27	11	to make these devices usable, and the '654 addresses that
09:19:29	12	core human engineering problem and these others as well.
09:19:31	13	Let's talk about some of these others. The second
09:19:34	14	category you have here is user behavior problems.
09:19:38	15	Can you describe how the '654 patent addresses
09:19:42	16	these issues?
09:19:43	17	A. Yes. We know from a large body of human factors
09:19:47	18	research literature that how users actually interact with
09:19:50	19	smartphones is much different than desktop computers that
09:19:54	20	came before them.
09:19:55	21	And we know specifically in low light conditions,
09:19:58	22	wet conditions, or when it's cold out, users make even less
09:20:02	23	likely accurate selections of their targets on the screen.
09:20:07	24	So this patent, by increasing the area of
09:20:09	25	selection and improving the reliability of the selection,

09:20:13	1	was a big improvement in the environmental factors and
09:20:17	2	related concerns for these devices.
09:20:19	3	Q. What about wide variation and user habits?
09:20:24	4	A. Yeah. Users it turned out, when we started
09:20:28	5	conducting the actual human factors research on these
09:20:32	6	devices, what we realized very quickly was that compared to
09:20:35	7	a desktop mouse, for example, which you basically can only
09:20:39	8	use in one way, users of modern smartphones use their
09:20:43	9	thumbs, two thumbs, index finger, combinations thereof,
09:20:47	10	they hold them in one hand, two hands.
09:20:49	11	And this wide range of variation in terms of how
09:20:52	12	users actually hold and interact with the device had a very
09:20:56	13	big impact on the accuracy with which they can make
09:20:59	14	selections on the screen.
09:21:00	15	So some users are very accurate and very fast,
09:21:04	16	others are much slower. And the '654 patent again, this
09:21:08	17	idea of selection of an area of interaction and pulling
09:21:12	18	forward to select an object reduced the error rate on this
09:21:16	19	particular problem as well.
09:21:18	20	Q. I want to ask you about this final category, variation
09:21:22	21	in business and phone functionality. How does the '654
09:21:26	22	patent contribute to these issues?
09:21:27	23	A. Yeah, that's a particularly interesting area. Because
09:21:31	24	as I was working on these types of products at this time,
09:21:35	25	it was made clear by the carriers and those are the cell

phone companies, if you will -- that there was going to be 1 09:21:40 a need to change their business model. 09:21:43 And what they wanted to do was offer to customers 09:21:45 3 a much wider range of apps or applications which they could 09:21:49 4 monetize against the devices. 09:21:52 So we knew in the -- excuse me again -- we knew in 09:21:54 6 7 the old phones they were very constrained in terms of the 09:21:59 number of apps you could develop. And so we saw the 8 09:22:02 smartphone, with its ability to gang together a large 09:22:05 number of apps, as a possible business solution for that 09:22:11 10 problem. 09:22:14 11 12 And then the second point there, wide variation in 09:22:15 app functionality, making the assumption that you could 09:22:20 13 load hundreds of apps on a typical smartphone. 14 09:22:24 15 The problem from a human factors science point of 09:22:28 view actually becomes how do you make all of those apps 16 09:22:31 useable in a way that makes sense? Because if each app 09:22:34 17 behaves differently, users very quickly reject them. 18 09:22:38 So what the '654 patent does essentially is it 19 09:22:43 20 provides an interaction behavior set, all of these claims 09:22:47 together. It's a standard behavior that can be applied 21 09:22:50 22 across a wide range of apps. 09:22:56 23 So it standardizes the learning, if you will. And 09:22:58 24 in human factor science, this idea is called transfer of 09:23:02 learning. It's extremely powerful. A reason why users 09:23:05 25

```
today on average have around 80 apps, and the Google App
         1
09:23:09
             Store offers around 5 and a half million apps for sale or
09:23:13
            download.
09:23:17
          3
             Q. Now, shifting gears, what are the specific OnePlus
09:23:18
            products subject to damages in this case?
09:23:22
            A. Yes. I have a chart here. These are -- these are
09:23:24
         7
            basically the products covered by the asserted claims.
09:23:27
         8
                What are these products?
            Q.
09:23:29
                These are all smartphones by OnePlus.
            Α.
09:23:31
             Q. At a high level, can you explain how the asserted
09:23:34
        10
             claims implement the benefits of the '654 patent?
        11
09:23:39
        12
            A. Sure. I've taken the simplest example here and -- just
09:23:41
09:23:46
        13
             to demonstrate to you, here you have the OnePlus -- OnePlus
        14
            phone.
09:23:52
        15
                      The user touches next to the settings icon, not
09:23:52
        16
             directly on the icon. That generates a pop-up on the
09:23:57
             screen. This happens to be search. If the user selects
09:23:59
        17
             the search pop-up, the search is delivered. If the user
        18
09:24:02
        19
             does not select the search pop-up, then they return back to
09:24:08
        20
             the screen.
09:24:12
         21
             Q. Is there any way that the jury can see this
09:24:12
             functionality for themselves?
         22
09:24:14
         23
            A. Yes, absolutely. I prepared two very short videos.
09:24:15
        24
             They're about 30 seconds long, PX-103 and PX-104. You can
09:24:19
09:24:24
        25
            run those videos and see exactly how the patent is
```

```
implemented in this particular example.
          1
09:24:27
             Q. Thank you.
09:24:31
          2
                      MS. KRAWICE: I pass the witness.
09:24:34
          3
          4
                      MR. AIRAN: May I approach the witness,
09:24:54
             Your Honor?
          5
09:24:55
          6
                      THE COURT: Yes.
09:24:56
          7
                                     CROSS-EXAMINATION
09:25:00
             BY MR. AIRAN:
          8
09:25:03
                Good morning, Mr. Mauro.
             Q.
09:25:03
                Good morning, sir.
09:25:07
         10
             Α.
                 My name is David Airan. We've met before?
09:25:08
         11
             Q.
             A. Yes, we have.
         12
09:25:10
             Q. You were just testifying about -- that the '654 patent
09:25:11
         13
             produces solutions to nine problems, correct?
         14
09:25:15
         15
             A. Yes, sir, it does.
09:25:18
             Q. Okay. And most of those problems relate to rapid
         16
09:25:19
             information display to allow a user to complete a task; is
09:25:22
         17
         18
             that fair?
09:25:22
             A. That's one aspect of them, yes. The invention is
         19
09:25:28
         20
             primarily focused on data entry error reduction.
09:25:30
         21
             Q. Okay. If we could take a look at two of your problems,
09:25:36
         22
             if we can.
09:25:39
         23
                      MR. AIRAN: If we can have PDX-18-2 up, please?
09:25:39
         24
             Q. (By Mr. Airan) So in your expert report, you describe
09:25:43
             Problems 2 and 3 as relating to the rapid display of
09:25:51
         25
```

```
1
             actions; is that correct?
09:25:54
          2
                      For example, when we're looking at Problem 2, you
09:25:56
             state that this problem is solved by displaying secondary
09:25:59
          3
             actions resulting from the user's input rapidly.
          4
09:26:03
                      Correct?
          5
09:26:06
                Yes, that's correct, sir.
09:26:07
          6
          7
                 Okay. And in Problem 3, you state: A smartphone GUI
09:26:08
             Ο.
             must provide rapid and very clear display of all actions.
          8
09:26:12
                      Correct?
09:26:16
         10
             A. Yes, sir, that's correct. In order to be effective and
09:26:16
             to produce a user experience that's going to lead to high
         11
09:26:20
             levels of engagement, that's correct.
         12
09:26:24
             Q. So Problems 2 and 3 and the solutions thereto relate to
09:26:26
         13
             rapid display of actions?
         14
09:26:31
         15
                 In general terms, yes.
09:26:33
             Α.
         16
             Q. If we can take a look at Problems 4 and 5, please.
09:26:34
             Problem 4 states: This problem is solved by rapid display
09:26:38
         17
             of secondary information.
         18
09:26:38
         19
                      Do you see that?
09:26:41
         20
             A. Yes, I do.
09:26:42
             Q. And Problem 5, again, which relates to lighting and
         21
09:26:43
         22
             contrast, you say: The resolution of this problem is the
09:26:47
         23
             rapid display of secondary information.
09:26:50
         24
                      Correct?
09:26:52
09:26:52
         25
             A. Yes, sir, I do.
```

```
Q. So Problems 4 and 5 also relate to rapid display of
          1
09:26:53
             information, correct?
          2
09:26:59
             A. In part. In the rapid display of information, the
09:27:00
          3
             accurate rapid display of information and its uptake by the
09:27:02
             user is a primary means for reducing errors and increasing
          5
09:27:03
             engagement.
09:27:07
          7
             Q. Okay. Thank you.
09:27:08
          8
                      MR. AIRAN: And if we could have the next slide,
09:27:09
             please. Let's take a look at Problems 6 and 8.
09:27:11
             Q. (By Mr. Airan) Problem 6 you state that smartphone GUI
09:27:14
         10
             must rapidly and clearly display information along the
09:27:17
         11
             pathway to task completion, correct?
         12
09:27:20
             A. Yes, sir.
09:27:23
         13
                And so that, again, is rapid display of information?
         14
             Q.
09:27:24
         15
                Yes.
09:27:27
             Α.
             Q. And if we look at Problem 8, you talk about an
         16
09:27:27
             element-by-element interaction sequence design that allows
09:27:30
         17
             for rapid error correction, correct?
         18
09:27:33
         19
             A. Yes, sir, that's correct.
09:27:35
         20
             Q. So Problems 6 and 8 also relate to the rapid display of
09:27:36
         21
             information along the pathway to task completion?
09:27:39
         22
                 In general terms, yes.
09:27:43
         23
                 And you summarized your problems, I believe, in your
09:27:45
         24
             expert report?
09:27:48
         25
09:27:50
                      MR. AIRAN: Put that up on the screen at Paragraph
```

```
77.
          1
09:27:53
             Q. (By Mr. Airan) You talk about the problem solved is
09:27:53
             how to design interactive sequences which means first
09:27:55
          3
             elements, second elements -- secondary elements, pop-ups,
09:27:59
             and timeout screen clearance procedures. Is that fair?
09:28:03
             A. In general terms, that's correct, yes, that's my
09:28:06
          6
09:28:08
          7
             summary.
             Q. Okay. So timeout screen clearance procedures is what
          8
09:28:09
             you talked about at the end of your direct examination,
09:28:12
09:28:15
         10
             right?
             A. Yes, there was a timeout example there, and the claims
09:28:15
         11
             of the '654 include the timeout function.
         12
09:28:18
09:28:21
         13
             Q. Okay. And that, in your view, makes the use of the
             phones more efficient?
         14
09:28:25
         15
             A. Oh, absolutely. Because it eliminates the secondary
09:28:25
             action required on the part of the user to clear the screen
         16
09:28:29
             and backup.
09:28:31
         17
             Q. All right. And you mentioned that you prepared some
         18
09:28:32
             videos; is that right?
         19
09:28:34
         20
             A. Yes, sir, I have.
09:28:35
         21
             Q. All right.
09:28:36
                      MR. AIRAN: Let's take a look at those videos.
         22
                                                                            Ιf
09:28:36
         23
             we can have PX-103 played, please.
09:28:39
         24
             Q. (By Mr. Airan) And you can voice over narrate what
09:28:43
             you're doing here.
09:28:46
         25
```

```
That's selection. That's the pop-up -- selection
          1
             A. Yes.
09:28:48
             of the pop-up. And that's the search function.
09:28:51
                So I think that's the end of 103?
09:28:57
          3
             Q.
                Yes, correct.
09:28:59
             Α.
             Q.
                 So what -- what happened there is when you clicked on
09:29:00
             the settings button, a search bar popped up, right?
09:29:03
          7
                That's correct.
09:29:06
             Α.
          8
             Q.
                Okay.
09:29:07
             A. This was an early video. In fact, the video that I
09:29:08
09:29:11
         10
             believe we prepared shows the user not selecting the icon
             directly.
09:29:16
         11
         12
             Q. Okay.
09:29:17
09:29:17
         13
             A. So this may have been an earlier video that we had
         14
             produced.
09:29:20
09:29:20
         15
             Q. All right. And if we can take a look at your second
            video, 104.
         16
09:29:24
         17
                      MR. AIRAN: If we can play that, please.
09:29:25
             A. User selecting again. I believe in this video, they do
         18
09:29:33
             not select the search, and it's going to time out and go
         19
09:29:37
         20
             back to the main screen.
09:29:40
         21
             Q.
                (By Mr. Airan) So that's the end of the video?
09:30:07
         22
                That's the end of this video, yes.
09:30:09
         23
             Q. So let's see if we can break that down a little bit.
09:30:10
         24
             What happened is to start --
09:30:14
         25
09:30:16
                     MR. AIRAN: Can you put the first part up, please?
```

```
Just the first -- yeah, just leave that up. You can pause
09:30:19
         1
             it there.
09:30:22
          2
             Q. (By Mr. Airan) So -- well, let's walk through this.
09:30:22
          3
                      MR. AIRAN: Go ahead and hit play, Mr. Carrillo,
          4
09:30:25
            please. So if you can pause there.
09:30:30
                 (By Mr. Airan) So the first step in this -- as you say
09:30:31
          6
         7
             OnePlus uses the phone, right? This is a OnePlus phone and
09:30:37
         8
            how OnePlus uses the technology, correct?
09:30:40
            A. This is a video from that examination -- from an
09:30:43
             examination of those functions, yes.
09:30:47
         10
         11
             Q. Okay. And so you click on the settings button, right?
09:30:49
         12
09:30:51
                      MR. AIRAN: If we could advance to that, please.
09:30:55
         13
             And then hit pause, please.
             Q. (By Mr. Airan) There's a search pop-up that occurs,
09:30:59
         14
         15
            right?
09:31:01
            A. Yes, it does.
         16
09:31:01
             Q. And that's part of how you say OnePlus uses the phone,
09:31:02
         17
            correct?
         18
09:31:05
         19
            A. Correct.
09:31:05
         20
09:31:05
             Q. All right. Now, one of the objectives here of the
            patent and the technology is to clear that pop-up, right?
         21
09:31:09
         22
                 That's one function of the '654, yes.
09:31:11
         23
             Q. Okay. And the way in which you say the OnePlus phone
09:31:15
09:31:18
         24
             clears that pop-up is through the lock screen, correct?
         25
            A. It clears the -- I don't make a specific requirement --
09:31:21
```

```
statement as to what it clears to. It clears the -- it
          1
09:31:27
             clears the -- it clears the pop-up.
09:31:30
             Q. There's a timer associated with the inactivity screen,
09:31:33
          3
             right?
09:31:36
             A. Yes, there is.
09:31:36
             Q. So when you stop using your phone, for example, you can
09:31:38
             set that timer, right? And if you stop using your phone,
          7
09:31:41
             it goes to lock, right?
          8
09:31:44
                In general terms, yes, that's correct.
             Α.
09:31:45
             Q. And for the Android phones, do you know the minimum
09:31:48
         10
             time that you have to set it there?
09:31:52
         11
         12
            A. I don't know what the minimum time is, no.
09:31:53
                You set it to 15 seconds in this video?
09:31:55
         13
             Q.
         14
            A. I believe it was set for around that time, yes. We did
09:31:58
         15
             a large number of videos. I'm not sure how much time this
09:32:01
            one was set for.
         16
09:32:05
             Q. We can count it, but it is 15 seconds.
09:32:06
         17
                      So the advantage that you're talking about here is
         18
09:32:08
         19
             you click the settings button, it does this pop-up search,
09:32:12
         20
             and then after that, you wait 15 seconds, and that pop-up
09:32:16
             goes away, correct?
         21
09:32:19
         22
            A. If that's the time that's been set for the pop-up, yes,
09:32:22
         23
            correct.
09:32:22
         24
             Q. Yes. And so let's look at that video again now that
09:32:25
09:32:28
         25
             we've kind of oriented the jury on what's happening here.
```

```
MR. AIRAN: So if you can hit play, please?
          1
09:32:33
                 (By Mr. Airan) So there, the screen goes into lockout,
          2
09:32:35
             right, after 15 seconds?
09:32:49
            A. Yes.
09:32:51
                And now the user is unlocking the phone?
             Q.
09:32:52
            A. And the pop-up is removed.
09:33:00
          7
             Q. Right. So the advantage, again, is removing the pop-up
09:33:01
             after waiting that 15 seconds, the phone goes into lockup
          8
09:33:05
            mode, and then you have to unlock the phone by using your
09:33:10
09:33:13
         10
             passcode, and then you've figured out that the pop-up is
             gone. Correct?
09:33:15
         11
             A. I don't remember the exact structure within Android,
         12
09:33:16
09:33:19
         13
             whether you can -- whether the timing related to a lockout
         14
             and dismiss of the pop-up are interrelated. I don't recall
09:33:24
         15
            at this time.
09:33:29
             Q. As you've shown in your video here -- this is a video
         16
09:33:29
             that you produced, just to be clear, right?
09:33:33
         17
             A. Yes, early video. One of the videos, yes.
         18
09:33:34
         19
             Q. All right. And so you're saying the advantages of the
09:33:37
         20
             pop-up goes away when the screen goes into lockout mode,
09:33:39
         21
            right?
09:33:43
            A. It does, yes.
         22
09:33:43
         23
             Q. All right. Wouldn't it be faster --
09:33:44
         24
                      MR. AIRAN: If we can hit the play, please, again
09:33:47
            on the video?
09:33:50
         25
```

```
(Video played.)
09:33:50
          1
             Q. (By Mr. Airan) So here you hit settings, the pop-up
09:33:51
          2
             happens.
09:34:01
          3
                      MR. AIRAN: And if you can hit pause, please,
          4
09:34:01
             Mr. Carrillo?
09:34:04
          6
                 (By Mr. Airan) Wouldn't it be faster if you wanted to
09:34:05
             Q.
             just get rid of that search pop-up, just to click anywhere
          7
09:34:07
             else on the screen? Wouldn't that also remove the pop-up?
          8
09:34:11
             A. Possibly.
09:34:14
             Q. Have you done that yourself?
09:34:18
         10
         11
             A. I have not. I looked -- I examined only the interface
09:34:19
             with respect to the context of the claims asserted in the
         12
09:34:24
             '654 patent. I didn't examine other procedures for removal
09:34:28
         13
09:34:32
         14
             of the pop-up.
         15
             Q. Okay. So if the user wanted to clear that pop-up and
09:34:33
             that's how you say OnePlus is using this technology, they
         16
09:34:36
             could click anywhere else on that screen most likely and
09:34:39
         17
             that pop-up would go away, right?
         18
09:34:42
                      MS. KRAWICE: Objection, Your Honor. Can we
         19
09:34:43
09:34:45
         20
             sidebar?
         21
                      THE COURT: Yes.
09:34:45
         22
                      (Bench conference.)
09:34:47
         23
                      MS. KRAWICE: Your Honor, I very much appreciated
09:34:57
         24
             that I talked a little bit about what the infringement read
09:34:59
             was, but I think we're getting a little far afield and
09:35:01
         25
```

```
we're talking about alleged values of non-infringing
09:35:03
          1
             alternatives, and I think it's misleading at this point.
09:35:06
          2
                      MR. AIRAN: There's no value to this patent.
09:35:09
          3
             There's no value to this patent. That's what I'm trying to
09:35:11
          4
                          Waiting for the lockout screen as opposed to
          5
09:35:15
             clicking anywhere else on the screen. This is about the
09:35:15
          6
             value of the patent. They're saying it's driving sales.
          7
09:35:15
             It's doing all this stuff.
          8
09:35:15
                      The pop-up -- the way they are asserting the
09:35:20
             patent is of no economic -- it's of no economic value
09:35:23
         10
         11
             whatsoever, and that's our position here. We're just
09:35:29
         12
             demonstrating that --
09:35:30
09:35:30
         13
                      THE COURT: As long as you stay away from
             non-infringing alternative.
         14
09:35:33
         15
                      MR. AIRAN: Yeah, for sure.
09:35:34
                      MS. KRAWICE: Okay.
         16
09:35:35
                      (Bench conference concluded.)
09:35:35
         17
         18
                 (By Mr. Airan) So, Mr. Mauro, you would agree that it
09:35:44
             would be faster and more useful if your objective was to
         19
09:35:46
         20
             just disappear the pop-up, to click anywhere else on the
09:35:50
             screen, right?
         21
09:35:53
         22
                      MS. KRAWICE: Objection, Your Honor.
09:35:54
         23
                      THE COURT: I'm sorry?
09:35:55
         24
                      MS. KRAWICE: Objection, Your Honor.
09:35:56
         25
                      THE COURT: What's the objection?
09:35:57
```

```
MS. KRAWICE: I believe this is almost nearly the
          1
09:35:58
            same question that was previously asked.
09:36:00
          2
                      THE COURT: I'll overrule it.
09:36:02
          3
             Q.
                 (By Mr. Airan) You can answer.
09:36:05
                 Can you repeat the question, please?
09:36:06
                 Sure. If you wanted to use your phone in a normal way
09:36:07
          6
          7
             to remove that pop-up, you could click anywhere else on the
09:36:12
             screen, right?
          8
09:36:14
                 I didn't examine that behavior. I'm not sure about --
09:36:15
                      MS. KRAWICE: Objection, Your Honor.
09:36:18
         10
         11
                      THE COURT: Same objection?
09:36:19
                      MS. KRAWICE: Similar, but can I explain further?
         12
09:36:20
                      THE COURT: Yeah, of course. Come up. Come
09:36:22
         13
             around.
         14
09:36:25
         15
                      (Bench conference.)
09:36:25
                      MS. KRAWICE: I think I just wasn't clear last
         16
09:36:33
             time.
09:36:35
         17
                      THE COURT: Okay. Fair enough.
         18
09:36:36
                      MS. KRAWICE: The infringement read ended once the
         19
09:36:37
         20
             screen was removed. Now, if you remember that we did have
09:36:41
         21
             a source code expert here to talk about when that happens.
09:36:43
         22
             Now they're talking about that you can click on other parts
09:36:47
         23
             of the areas of the thing.
09:36:49
         24
                      That's not an infringement read. That wouldn't,
09:36:51
             like, read on the claims of this patent. That would be a
09:36:54
         25
```

```
non-infringing alternative to talk about tapping in other
         1
09:36:56
            areas. That's not what this patent covers at all.
09:36:59
          2
                      MR. AIRAN: This is not about non-infringing
09:37:01
          3
             alternatives. It's about the value. They say the value is
09:37:03
             waiting for this timer to expire, then the pop-up goes
09:37:05
             away. That's what he testified to is that the -- what I'm
09:37:08
         7
            pointing out is that when you wait for a lock screen timer
09:37:12
             to expire, that's not a value. You could do something else
         8
09:37:16
             if you wanted the pop-up to go away.
09:37:18
                      That's the only point we're making. He's
09:37:21
        10
        11
             testified all day about the ergonomics and human factors
09:37:21
        12
             and how great it is. And we're just pointing out that it's
09:37:24
09:37:27
        13
            not that great.
                      THE COURT: As long as you stay away from
        14
09:37:28
        15
            discussions about non-infringing alternatives, I'll --
09:37:31
        16
                      MR. AIRAN: Sure.
09:37:33
                      MS. KRAWICE: Your Honor, I believe that this
09:37:34
        17
             question does go to that. Because tapping outside is not
        18
09:37:34
             part of -- that would not read on the patent. To tap
        19
09:37:35
        20
             outside, that's a different thing than what the patent is
09:37:39
             claiming. If you want me to bring you the patent claims, I
         21
09:37:42
         22
             can but...
09:37:45
        23
                      MR. AIRAN: It's about the value of the patent.
09:37:45
        24
            That's what we're talking about.
09:37:47
        25
                      THE COURT: As long as you clarify your question
09:37:48
```

```
is about the value of the patent.
09:37:52
          1
                      You've made your record. I'm going to overrule
09:37:54
          2
             your objection.
09:37:56
          3
          4
                      MS. KRAWICE: Thanks.
09:37:57
                      (Bench conference concluded.)
          5
09:37:58
             Q. (By Mr. Airan) Thank you, Mr. Mauro. So what I'm
09:38:00
          6
          7
             trying to understand is the value to a user of this
09:38:06
          8
             technology. Do you understand that?
09:38:08
             A. Yes, sir, I do.
09:38:10
             Q. And so if the user wanted the pop-up to go away, they
09:38:11
         10
             wouldn't have to wait for the screen to time out, correct?
09:38:15
         11
            A. I haven't examined that feature.
         12
09:38:19
09:38:21
         13
             Q. Okay. Do you know if you clicked anywhere else on the
             screen if that pop-up would go away on its own?
         14
09:38:23
         15
            A. I've not examined that functionality. Only with the --
09:38:25
             the functions as they apply to the '654 claims as asserted.
         16
09:38:31
             Q. So the way you examined it, you waited for -- in order
09:38:36
         17
         18
             to get that pop-up to go away, you waited for the 15
09:38:39
             seconds at least, and then the screen to lockout, and then
         19
09:38:42
         20
             to put your lock -- your unlock code in and then for
09:38:46
         21
             that -- then to determine that the pop-up had gone away,
09:38:50
         22
             right?
09:38:52
         23
             A. In that example, yes.
09:38:52
         24
             Q. And that was the only example that you pointed to,
09:38:54
         25
            correct?
09:38:56
```

```
I believe so, but I'm not sure.
          1
            Α.
09:38:56
                 Okay. Let's turn to a different topic.
09:38:59
          2
             Q.
                      MR. AIRAN: If I could have PDX-18-6, please.
09:39:01
          3
                 (By Mr. Airan) Would you agree that there are millions
             Q.
09:39:07
             of interactive features and functions that are unique on
09:39:11
            modern smartphones?
09:39:15
             A. Well, from a human factors science point of view, you
          7
09:39:16
             have to be very specific about what is a feature and what
          8
09:39:22
             is an interaction behavior. Pardon me. One might think by
09:39:25
             simply -- simple examination of a smartphone that all
09:39:37
         10
         11
             feature -- all functions are features, but they're not.
09:39:41
         12
                      From the standpoint of human factors and the
09:39:45
             benefit of the '654, the '654, together, those features
09:39:49
         13
             together form an interaction behavior. And in my field of
         14
09:39:56
             science, that is not a feature. A feature would be an app.
         15
09:39:59
             For example, let's say TikTok would be a feature embedded
         16
09:40:04
             under the functionality of the claims as asserted by the
09:40:07
         17
         18
             654.
09:40:13
                      The '654 is a set of functions that sit on top of
         19
09:40:13
09:40:18
         20
             the features that allow access to many different features.
         21
             Ο.
                 Okay. Do you have a smartphone, Mr. Mauro?
09:40:21
         22
             Α.
09:40:23
                 Sure.
         23
             Q.
                 When you have a pop-up come up, do you rely on the
09:40:24
         24
             inactivity timer or screen lockup to clear out your
09:40:27
         25
            pop-ups?
09:40:34
```

```
It depends on what I'm doing. If I get distracted then
         1
09:40:34
             I will allow it to time out, sure.
09:40:37
          2
             Q. But, ordinarily, when you're using your smartphone,
09:40:40
          3
            would you want to wait for the lockout screen to clear a
09:40:43
            pop-up?
09:40:46
             A. Well, that's completely determined by how the user
09:40:46
          6
             interacts with their phone. And one of the things that
         7
09:40:49
         8
            human factors science makes totally clear is that it's
09:40:52
             extremely difficult to predict exact behaviors with respect
09:40:55
             to how users interact with their phones. We have billions
09:41:00
        10
             of cell phone users now, smartphone users on the planet.
09:41:05
         11
             Q. So we talked about six of your nine problems being the
        12
09:41:09
09:41:12
        13
             rapid display of information and the rapid clearance of
             objects in order to complete a task. Do you recall that?
09:41:16
        14
        15
            A. Yeah, well, that's what you've chosen to highlight.
09:41:19
            But the claims of the '654 also offer other benefits which
        16
09:41:24
            are important to the usability of the device.
09:41:30
        17
        18
                 So I want to focus on rapid now.
             Ο.
09:41:33
        19
            Α.
                 Sure.
09:41:35
         20
                Six of your nine problems are directed to rapid.
09:41:36
             Q.
             you wanted to rapidly use your phone, you would not wait 15
         21
09:41:40
         22
             seconds for a screen to go into lockout and then unlock
09:41:44
         23
             your phone in order to complete the task, right?
09:41:48
         24
            A. No, likely you wouldn't if the task you were involved
09:41:50
             in was related to a specific objective that was very
09:41:54
         25
```

09:41:59	1	time-dependent. On the other hand, might have other tasks
09:42:04	2	that you're interacting with that would be appropriate to
09:42:07	3	allow that time to extend.
09:42:08	4	So when a human factors engineer looks at a use
09:42:15	5	case or how the user interacts with the phone, you always
09:42:18	6	look at a combination of frequency and criticality. So the
09:42:22	7	criticality issue may come into play where you left the
09:42:28	8	phone time out and the frequency of selection may be, for
09:42:32	9	example, in a task like scrolling TikTok.
09:42:35	10	So you can't partition very discretely the
09:42:40	11	behavior of high-level interaction patterns like the '654
09:42:44	12	and the underlying features of something like scrolling
09:42:49	13	TikTok.
09:42:50	14	Q. Again, if we focus on just six of your nine problems
09:42:53	15	dealing with the rapid presentation of information, a user
09:42:57	16	who wanted to use the phone in a way that solves six of
09:43:00	17	those nine problems would not want to wait 15 seconds to
09:43:04	18	clear a pop-up; isn't that correct?
09:43:07	19	A. I don't think that's necessarily true. It depends on
09:43:09	20	what the task is. When you look at the design of the user
09:43:14	21	interface for these types of products and you're creating
09:43:18	22	apps, there are certain times when maybe the user is
09:43:22	23	distracted doing another task.
09:43:25	24	One of the great benefits of the modern smartphone
09:43:27	25	is that you can multi-task. So if they started on a

```
procedure and then got interrupted by a phone call, then
09:43:32
         1
            having a timeout is fine.
09:43:35
             Q. Okay. You've not offered an opinion on whether there's
09:43:39
          3
             any specific value associated with waiting 15 seconds for a
09:43:41
             pop-up to be cleared, correct?
09:43:46
          6
             A. I have not.
09:43:48
         7
             Q. Okay. And would you agree that the removal of pop-ups
09:43:50
         8
             upon expiration of the inactivity timer is not a
09:43:54
             commercially essential feature?
09:43:57
                 I absolutely would not agree with that.
09:44:00
        10
                 That's -- you're saying -- so removal of pop-ups after
09:44:02
         11
        12
             15 seconds -- are you with me -- is a commercially
09:44:06
             essential feature?
09:44:10
        13
             A. I would say that the removal -- the function of being
        14
09:44:11
        15
             able to remove a pop-up after a period of time which can be
09:44:14
             set or is determined is a feature that is in the core
        16
09:44:19
             functionality of the high-level operation of the modern
09:44:27
        17
             smartphone that can then be used to design apps that are
        18
09:44:31
             consistent in terms of behavior. So from the standpoint of
        19
09:44:36
         20
             usability, it's a -- it's an essential feature, yes.
09:44:39
         21
                      Now, the essential feature question, again,
09:44:44
         22
             relates to what are the priorities that the user places on
09:44:48
         23
             their specific interaction with the phone itself. That's
09:44:53
         24
             what determines, you know, on a discrete level.
09:44:56
         25
                      That's why designing a smartphone is so difficult
09:45:00
```

```
because you can't predict the exact behaviors that users
          1
09:45:03
             are going to interact with -- with respect to the phone and
09:45:08
             their apps and their objectives.
09:45:12
             Q. Mr. Mauro, my time is limited, so I'd appreciate it if
09:45:14
             you could listen to my question and try to answer my
09:45:17
             question. Is that fair?
09:45:19
                Sure, yeah.
          7
09:45:21
             Α.
             Q. Okay. So have you seen any evidence that -- well,
          8
09:45:21
             let's -- let's set the -- let's set the stage again.
09:45:25
09:45:29
         10
                      What you're saying is when a user uses his phone
             and a pop-up appears and it's unwanted, it goes away after
09:45:32
         11
         12
             15 seconds because of the lock screen, and that's an
09:45:36
09:45:39
         13
             advantage. Correct?
09:45:39
         14
             A. That's one use case.
         15
             Q. Okay. Is it also a possibility that it's an advantage
09:45:41
             to have that pop-up remain after the lockup -- lockout
         16
09:45:43
             screen comes into play after 15 seconds?
09:45:50
         17
             A. That's a possibility. There might be a use case where
         18
09:45:53
             that applies, but I can't recall one.
         19
09:45:57
         20
             Q. Okay. So sometimes the pop-up will stay on at lockout
09:45:59
         21
             when you unlock the phone, and other times it will be
09:46:02
         22
             clear, right?
09:46:05
         23
            A. I believe so.
09:46:05
         24
             Q. And there's advantages to both of those use cases,
09:46:06
         25
            right?
09:46:10
```

```
09:46:10
          1
            Α.
                 Yes, there is.
                 Have you seen any evidence in this case that the
09:46:12
          2
             clearance of a pop-up after a lockup screen -- lockout
09:46:14
          3
             screen is driving sales of any OnePlus phones?
09:46:17
             A. No, of course. And you wouldn't see that because the
09:46:21
             type of research that my clients do relates to high-level
09:46:25
          7
             business objectives that relate to functionality that users
09:46:32
             find particularly important in their interaction with the
          8
09:46:36
             apps.
09:46:39
                      So the modern smartphone today is driven by apps.
09:46:39
         10
         11
             The market research that I've seen does not look at
09:46:43
         12
             discrete, specific features. It takes the whole
09:46:47
09:46:50
         13
             interaction of the phone into account and values that.
                 So the sales of the smartphones, as we have here up on
09:46:55
         14
         15
             the screen, are driven by apps basically, right, by the
09:46:59
             apps that are available and that you can put onto your
         16
09:47:02
             phone, correct?
09:47:05
         17
             A. No, that's not correct. The sale of modern smartphones
         18
09:47:06
             are driven overwhelmingly by the overall usability of the
         19
09:47:09
         20
             device itself, the user's ability to interact with it in a
09:47:13
             way that is consistent across many different types of
         21
09:47:17
         22
             applications. And no individual app ever drives a sale of
09:47:21
         23
             a smartphone, nor do groups of apps.
09:47:26
         24
             Q.
                Nor do features, right?
09:47:28
         25
09:47:30
             Α.
                Apps are features. The same -- same answer.
```

```
Q. Okay. Let's move to a different subject.
09:47:33
          1
          2
                      You are aware that Pantech has asserted more than
09:47:35
             one patent in this case?
09:47:38
          3
                Yes, sir, I am.
             Α.
09:47:40
                And you heard Dr. Cooklev yesterday talk about the '247
09:47:41
            patent?
09:47:45
          7
                Yes, sir, I have.
            Α.
09:47:45
                Did you hear Dr. Cooklev testify that forward citation
          8
             Q.
09:47:46
             is a way of determining the value of the patent?
09:47:49
            A. I did hear that.
09:47:51
         10
             Q. Have you performed a forward citation analysis for the
09:47:52
         11
             '654 patent?
         12
09:47:56
09:47:56
         13
             A. I have not, and that wouldn't be a common practice in
            the field of human factors engineering.
         14
09:48:00
         15
             Q. Would it surprise you to learn that the '654 patent has
09:48:02
             been cited only once by another patent?
         16
09:48:06
             A. No, I wouldn't -- we don't -- as -- in the field of
09:48:09
         17
             human factors engineering, we don't use forward citations
         18
09:48:14
         19
             as a measure of the importance of a patent or the
09:48:17
         20
             applicability of a patent.
09:48:20
         21
                      Clients come to me every day with patents written
09:48:22
         22
             in dense legalese like '654, and they ask me very
09:48:26
         23
             specifically, does this patent have value in terms of human
09:48:30
         24
             factors engineering benefits to our product? I do for my
09:48:34
             clients exactly what I did for the jury. I list the
09:48:37
         25
```

benefits. 09:48:40 1 2 And under that situation, I don't proffer actual 09:48:41 financial impact. That's the -- they have economists who 09:48:46 3 can do that, but I always proffer a list of benefits or 09:48:52 lack of benefits from the reading of the patent. 5 09:48:56 Sure. And so, just to be clear, forward citation 09:48:59 6 7 analysis is a way to value patents, and you did not do that 09:49:02 for the '654 patent, correct? 8 09:49:05 A. No, it's not a way to value GUI patents. It certainly 09:49:06 is not. No one in the field does that, no. You look at 09:49:10 10 the claims, and you look at the benefits. 09:49:14 11 Q. All right. Fair enough. 12 09:49:16 09:49:17 13 And is there any metric that the jury could look at to determine the value of the '654 patent, a 14 09:49:21 15 quantitative measurement? 09:49:25 A. Well, I think you have to think about the behaviors 16 09:49:27 that the device is providing to the user and how it's 09:49:35 17 impacting their ability to use the product. So -- well, 18 09:49:40 let me finish. 19 09:49:45 20 So prior to the modern smartphone, we had the flip 09:49:47 phones which were highly error prone and very 21 09:49:52 22 time-consuming to use. And this is a feature set combined 09:49:55 23 into a behavior that improves the usability of these phones 09:49:59 24 at the core operational level -- at the high level of 09:50:04 09:50:08 25 Android where it makes access to apps and their

```
functionality possible.
09:50:11
          1
                 So do you remember my question?
09:50:13
                Can you repeat it?
09:50:15
          3
             Α.
                Is there a quantitative measurement that you can
09:50:17
             present to the jury, quantitative, that would assess the
09:50:20
             value of the '654 patent?
09:50:24
          7
             A. No, there is not.
09:50:26
             O. Okay. Thank you. Thank you for answering that
          8
09:50:27
             question.
09:50:29
                      You're not qualified to offer opinions about the
09:50:30
         10
         11
             '247 patent that Dr. Cooklev testified about; is that
09:50:33
         12
             correct?
09:50:35
09:50:35
         13
             A. No, sir. I've not looked at that patent.
             Q. And you're only here to offer opinions about the '654
         14
09:50:38
         15
             patent, correct?
09:50:43
         16
             A. Yes, sir, that's correct.
09:50:43
                Did you review any technical documents that compared
09:50:44
         17
         18
             the '654 patent, about which you're testifying, to the '247
09:50:47
         19
             patent?
09:50:52
         20
             A. No, sir, I did not.
09:50:52
         21
             Q. Did you review any internal Pantech documents that
09:50:53
         22
             compared the '654 patent, about which you're testifying, to
09:50:56
         23
             the '247 patent that Dr. Cooklev testified about?
09:51:01
         24
             Α.
                No, sir, I did not.
09:51:03
                Same question for market reports, did you review any
         25
09:51:04
             Ο.
```

```
market reports that would compare the '654 patent to the
09:51:08
          1
             '247 patent?
09:51:11
          2
             A. What do you mean by market reports?
09:51:11
             Q. Market reports that compare the '654 patent -- any type
09:51:14
             of market report whatsoever that compared the '654 patent,
09:51:18
             the value of it, to the '247 patent?
09:51:21
                No, sir, I didn't.
          7
09:51:23
             Α.
             Q. Did you review any scientific reports that compared the
          8
09:51:24
             value of the '654 patent to the '247 patent?
09:51:28
09:51:30
         10
             A. No, sir.
             Q. You understand that Pantech has retained Dr. Putnam as
09:51:32
         11
             an economic expert?
         12
09:51:39
09:51:40
         13
             A. Yes, sir, I do.
                And you've spoken with him; is that correct?
         14
             Ο.
09:51:42
         15
                I have spoken with Dr. Putnam, yes.
09:51:44
             Α.
             Q. Okay. Have you ever spoken with Dr. Putnam about the
         16
09:51:46
             value of the '247 patent?
09:51:49
         17
         18
             A. No, sir, I have not.
09:51:51
             Q. Have you ever offered or communicated any opinions
         19
09:51:52
         20
             about the value of the '247 patent with respect to the '654
09:51:55
         21
             patent to Dr. Putnam?
09:52:00
         22
             A. As a comparison?
09:52:01
         23
             Q. Yes.
09:52:02
         24
             Α.
                No, sir.
09:52:04
             Q. You have no opinion on that point, correct?
09:52:04
         25
```

```
1
             Α.
                I do not.
09:52:06
          2
             Q. Thank you.
09:52:06
                      MR. AIRAN: Pass the witness.
09:52:07
          3
                      THE COURT: Redirect?
          4
09:52:08
                      MS. KRAWICE: Briefly, Your Honor.
          5
09:52:11
09:52:12
          6
                                   REDIRECT-EXAMINATION
             BY MS. KRAWICE:
          7
09:52:12
             Q. Mr. Mauro, is the functionality in the video that was
          8
09:52:17
             shown in your opinion an example of the claimed invention?
09:52:20
             A. No, it's not. The video that -- the animation that I
09:52:23
         10
             have is a more accurate depiction of the -- of the product.
09:52:29
         11
         12
             Q. I believe you may be confused.
09:52:34
09:52:37
         13
                      MS. KRAWICE: Mr. Ebersole, can you pull up the
         14
             last slide of...
09:52:39
             A. Oh, excuse me, I thought you meant the video showed by
09:52:47
         15
             counsel.
         16
09:52:51
                 (By Ms. Krawice) Mr. Mauro, this slide was derived
09:52:55
         17
             from the videos that counsel showed you, correct?
         18
09:52:59
         19
             A. I believe so, yes.
09:53:02
         20
             Q. And this functionality was shown in your opinion as an
09:53:03
         21
             example of the claimed invention?
09:53:08
         22
             A. Yes, -- yes, ma'am, it was.
09:53:09
         23
                      MS. KRAWICE: No further questions.
09:53:12
         24
                      MR. AIRAN: No recross, Your Honor.
09:53:14
09:53:15
         25
                      THE COURT: All right. You may step down.
```

```
All right. Plaintiffs may call their next
          1
09:53:27
          2
            witness.
09:53:29
                      MS. KRAWICE: At this time, Pantech calls Yori
09:53:34
          3
             Xiao by video deposition.
          4
09:53:38
                             YORI XIAO, PLAINTIFFS' WITNESS
          5
09:53:38
                              PRESENTED BY VIDEO DEPOSITION
09:53:38
          6
          7
                       (Videoclip played.)
09:53:38
                 Good morning, Mr. Xiao. Would you please state your
          8
             Q.
09:54:12
             name for the record?
09:54:18
             A. Yori Xiao.
09:54:18
         10
                 Who is your employer?
09:54:19
         11
             0.
         12
             Α.
                OnePlus.
09:54:21
09:54:22
         13
             Q.
                What is your title at OnePlus?
                Senior IP attorney or counsel.
         14
             Α.
09:54:25
         15
                And what is your role as senior IP attorney at OnePlus?
09:54:25
             Q.
             A. Okay. So my responsibilities are mainly categorized in
         16
09:54:29
             three areas. First is license or -- license or
09:54:32
         17
             permit-related. That means if a claim -- a person who asks
         18
09:54:40
             for the claim or my license, like a Pantech -- Pantech, the
         19
09:54:46
         20
             companies like Pantech would like to obtain a claim, and
09:54:51
             then I would negotiate with the other party on the
         21
09:54:55
         22
             license-related issue on behalf of Pantech -- on behalf of
09:55:01
         23
             OnePlus.
09:55:08
         24
                      The second part is -- is involved in litigation,
09:55:09
             especially in patent litigations, and, for instance, with
09:55:18
         25
```

09:55:20	1	the U.S. and India and Spain, if any litigations occurred,
09:55:28	2	I would work with the external counsels as an internal
09:55:37	3	counsel as well as our internal employees to work on those
09:55:40	4	litigations.
09:55:41	5	Q. And then the third part is the daily day-to-day job
09:55:50	6	responsibility involving the policy study and internal
09:55:57	7	employee IP awareness training and education. So this is
09:56:05	8	the third part.
09:56:06	9	And among all three parts of the responsibilities,
09:56:10	10	the first part, which is license-related responsibility, is
09:56:15	11	the it takes more takes the most amount. That is my
09:56:24	12	answer.
09:56:24	13	Q.
09:56:27	14	
09:56:31	15	A.
09:56:38	16	
09:56:42	17	
09:56:50	18	
09:56:57	19	
09:57:03	20	
09:57:04	21	
09:57:13	22	
09:57:17	23	
09:57:22	24	(Videoclip ends.)
09:57:28	25	MS. KRAWICE: I'd just like to read a couple of

```
stipulations into the record at this time.
09:57:29
         1
          2
                      THE COURT: All right. Does that complete the
09:57:31
            video?
09:57:32
         3
                      MS. KRAWICE: Yes, Your Honor.
          4
09:57:32
                      THE COURT: All right. And have you all allocated
          5
09:57:33
            between the Plaintiffs and the Defendant how much time is
09:57:35
          6
            to be allotted to each?
         7
09:57:39
                      MS. KRAWICE: Yes. That's actually fully our
         8
09:57:41
         9
            time.
09:57:44
                      THE COURT: Okay. All of that is Pantech time.
09:57:44
        10
        11
                      MS. KRAWICE: Yes.
09:57:47
        12
                      THE COURT: All right. Very good.
09:57:47
09:57:48
        13
                     MS. KRAWICE: Got to start the stopwatch at some
09:57:51
        14
            point.
                      THE COURT: All right. Good enough.
        15
09:57:51
                     MS. KRAWICE: I'll just continue reading some
        16
09:57:53
             stipulations. There's a lot of numbers. I'm going to try
09:57:54
        17
             to go slow here.
        18
09:57:57
                      With respect to the '839 patent, licensable sales
        19
09:57:58
        20
             of the accused products began on January 21st, 2021, which
09:58:02
             is the date on which Pantech gave notice to OnePlus.
         21
09:58:07
        22
                      The licensable sales revenue base of the accused
09:58:10
        23
            products with respect to the '839 patent is $1,251,157,275.
09:58:15
09:58:29
        24
                     With respect to the '247 patent, licensable sales
            of the accused products began on July 9th, 2021, which is
09:58:33
        25
```

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the date on which Pantech gave notice to OnePlus.
09:58:37
          1
          2
                      The licensable sales revenue base of the accused
09:58:39
             products with respect to the '247 patent is $889,723,598.
09:58:44
          3
                      With respect to the '954 and '654 patents,
          4
09:58:56
             licensable sales of the accused products began on June 3rd,
          5
09:59:01
             2022, which is the date Pantech filed the complaint in this
09:59:06
          6
          7
             action.
09:59:09
                      The licensable sales revenue base of the accused
          8
09:59:09
             products with respect to the '954 patent is $294,551,910.
          9
09:59:13
                      The licensable sales revenue base of the accused
09:59:26
         10
         11
             products with respect to the '654 patent is $392,511,428.
09:59:30
         12
                      That's all.
09:59:43
09:59:45
         13
                      THE COURT: Very good. Thanks.
                      All right. And that was stipulated to between the
         14
09:59:46
            parties?
         15
09:59:49
                      MS. KRAWICE: Yes, Your Honor.
         16
09:59:50
         17
                      THE COURT: All right. Okay. I think before we
09:59:50
         18
             take the next witness, now would be a good time for us to
09:59:52
             take our morning break just a few minutes early. So we'll
         19
09:59:55
             be in recess about 15 minutes.
         20
09:59:59
                      COURT SECURITY OFFICER: All rise.
         21
10:00:01
         22
                      (Recess.)
10:04:19
         23
                      (Jury out.)
10:04:20
10:04:20
         24
                      COURT SECURITY OFFICER: All rise.
         25
                      THE COURT: Mr. Grigsby, if you would have the
10:21:27
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jury brought down.
10:21:37
          1
          2
                       (Jury in.)
10:22:01
                       THE COURT: Please be seated.
10:22:01
          3
                       At this time, the Plaintiffs may call their next
          4
10:22:23
             witness.
          5
10:22:27
          6
                       MR. TIDWELL: May it please the Court.
10:22:28
          7
                       Your Honor, Plaintiffs call Dr. Jonathan Putnam.
10:22:33
                       (Witness sworn.)
          8
10:22:46
          9
                       THE COURT: You may have a seat.
10:22:59
                       MR. TIDWELL: May I proceed, Your Honor?
10:23:14
         10
         11
                       THE COURT: You may.
10:23:16
                   JONATHAN PUTNAM, PH.D., PLAINTIFFS' WITNESS, SWORN
         12
10:23:17
10:23:17
10:23:17
         13
                                      DIRECT EXAMINATION
10:23:18
         14
             BY MR. TIDWELL:
         15
                  Good morning.
10:23:18
             Q.
                 Good morning.
         16
             Α.
10:23:22
                  If you would, Dr. Putnam, state your full name.
10:23:23
         17
             Q.
                  My name is Jonathan Douglas Putnam.
         18
             Α.
10:23:26
                 What is your occupation?
         19
             Q.
10:23:26
10:23:31
         20
             Α.
                 I'm an economist.
                 If you would, tell the jury a little bit about your
         21
10:23:31
         22
             educational background.
10:23:33
         23
             A. Sure. I graduated from high school in Seattle,
10:23:33
         24
             Washington, at the public school. My parents were
10:23:38
         25
             teachers.
10:23:41
```

10:23:42	1	For college, I went to Yale University. I studied
10:23:45	2	agricultural economics and wrote my senior thesis on
10:23:53	3	improving crop yields in agriculture.
10:23:57	4	I then worked at Yale for several years on a
10:24:00	5	project designed to measure the output of agricultural
10:24:07	6	experiment output stations, like the one in College
10:24:09	7	Station.
10:24:09	8	Reenrolled at Yale as a graduate student, received
10:24:13	9	my master's degree in economics, and then eventually
10:24:14	10	received my Ph.D. on the economics of the patent system.
10:24:18	11	Q. How did how did you transition from agricultural
10:24:27	12	economics to studying patents?
10:24:28	13	A. Well, I've always been interested in how you get more
10:24:32	14	out of something, how you improve something. So in
10:24:36	15	agriculture, that means how you increase crops yields, how
10:24:39	16	you get more crops per acre.
10:24:40	17	But it really applies to a wide variety of fields,
10:24:42	18	like how do you get better gas mileage out of a car or how
10:24:45	19	do you make a safer drug. And the way you do that is you
10:24:50	20	invest in R&D. You have to learn about the thing you're
10:24:53	21	studying and how to get more output per unit of input.
10:24:57	22	And reason you invest in R&D or the way you
10:24:59	23	invest in R&D is because the patent system offers you a
10:25:02	24	reward for doing that.
10:25:03	25	So when you invest in R&D, you get a patent, you

10:25:06	1	get an invention, and that allows you to prevent other
10:25:10	2	people from copying your invention, and so you get a return
10:25:13	3	on your investment. And I wanted to understand how the
10:25:17	4	patent system induced people to invest in R&D in a wide
10:25:22	5	variety of fields, not just agriculture.
10:25:24	6	Q. After you graduated with a Ph.D., just take the jury
10:25:26	7	forward as far as your education your work experience,
10:25:32	8	I'm sorry.
10:25:32	9	A. Sure. So after my Ph.D., I joined a firm called
10:25:36	10	Charles River Associates which is located in Boston near
10:25:40	11	where I live. And there, I worked on merger analysis.
10:25:44	12	So when two firms come together, they have to
10:25:48	13	explain to the Government why they should be allowed to
10:25:50	14	merge, and that requires a whole bunch of Government
10:25:54	15	filings and that sort of thing. I did that for a few
10:25:56	16	years.
10:25:56	17	And I continued to work as an expert witness in
10:26:00	18	trials like this one.
10:26:01	19	Then I was promoted to vice president of that
10:26:06	20	consulting firm and became a professor at the University of
10:26:09	21	Toronto in the law school there. They had a chair in the
10:26:13	22	law and economics of intellectual property, which was
10:26:16	23	really the field that I specialized in.
10:26:18	24	So I was at the University of Toronto for five
10:26:21	25	years. Returned back to Charles River Associates at the

```
end of that time. And then in 2012, I formed my own
         1
10:26:25
            consulting firm called Competition Dynamics. And that's
10:26:29
            where I'm employed today.
10:26:32
            Q. What would you describe as your area of expertise in
10:26:34
            economics?
10:26:40
            A. It's really the economics of intellectual property. I
10:26:41
         7
            focus on the patent system, and so anything having to do
10:26:43
            with the patents, copyright, trade secrets, trademark, what
         8
10:26:47
            economists call intangible rights, the value of those
10:26:53
            things and how you determine their value in the marketplace
10:26:57
        10
            is what I do.
        11
10:26:59
        12
            Q. Have you ever testified in a case where the patent or
10:27:00
10:27:04
        13
            the patents at issue were standard essential patents or
            essential to a standard?
        14
10:27:09
            A. Yes. I've worked on many of those cases, maybe 30 or
10:27:10
        15
            35 times.
        16
10:27:14
            Q. Okay. Have you testified not only in the U.S. but
10:27:15
        17
            elsewhere on standard essential patents?
        18
10:27:19
            A. Yes, I've testified in the U.K., Germany, India, China,
        19
10:27:23
        20
            Singapore, really around the world.
10:27:31
        21
            Q. In this case, Dr. Putnam, what were you asked to do
10:27:33
        22
            to -- as far as your work project? What was asked of you
10:27:40
        23
            to do?
10:27:44
        24
            A. Well, this case is relatively simple in the following
10:27:45
            sense: There's -- there's four patents at issue in this
10:27:48
        25
```

10.05.50	1	and One Dive her held we have many inferious and a six
10:27:50	1	case. And OnePlus has told us how many infringing sales it
10:27:57	2	has made or how many sales it's made that infringe each one
10:28:00	3	of those patents.
10:28:02	4	So what we really have to do in this case is find
10:28:04	5	a royalty rate for each one of those patents and then
10:28:09	6	multiply it by the sales that OnePlus has told us, in order
10:28:12	7	to determine the total damages that OnePlus should pay to
10:28:16	8	Pantech for its infringement.
10:28:19	9	Q. So before you reached that conclusion or before you're
10:28:25	10	able to make that decision, can you give the jury some
10:28:30	11	examples of materials that you would look at, things that
10:28:33	12	you would do before you reach your conclusion?
10:28:36	13	A. Sure. There's a wide variety of documents that are at
10:28:40	14	issue produced in this case, as in every case. There's
10:28:44	15	a complaint and an answer. The parties have to answer
10:28:47	16	questions back and forth to each other. Of course, I pay
10:28:51	17	special attention to the economic documents, like sales
10:28:54	18	documents and the way the products are marketed, which ones
10:28:58	19	infringe which patents, when they were sold, that sort of
10:29:02	20	thing.
10:29:02	21	The most important category of documents that's
10:29:04	22	produced in a case like this is the licenses because the
10:29:08	23	licenses tell you how much people pay for technology that
10:29:13	24	is used in the products that OnePlus sells and that Pantech
10:29:17	25	licenses. And so we're going to pay most of our attention

```
to the license documents.
         1
10:29:20
             Q. Let's work a little backwards if you don't mind.
10:29:21
          2
                      Have you, after considering all the things you've
10:29:31
          3
             just talked about, have you reached an opinion as to the
10:29:33
          4
             appropriate amount of damages?
10:29:36
            A. Yes.
10:29:37
          6
         7
            Q. And did you prepare a PowerPoint presentation that you
10:29:40
            believe would assist the jury in understanding your
         8
10:29:45
            testimony?
10:29:49
            A. I did.
10:29:49
        10
        11
                      MR. TIDWELL: Okay. Let's put up Slide No. 2.
10:29:50
             Q. (By Mr. Tidwell) Looking at PDX-6.2, can you explain
        12
10:29:54
             this calculation to the jury?
10:30:01
        13
            A. Yes. So I mentioned that there were four patents at
10:30:03
        14
             issue in this case. Three of them are what are called
        15
10:30:06
             SEPs, or standard essential patents. You have to use them
        16
10:30:09
             in order to sell a phone. And one of them is an NEP, or
10:30:13
        17
        18
            non-essential patent.
10:30:16
                      The damages for the three essential patents shown
        19
10:30:17
        20
             on the top line are $836,591.
10:30:22
         21
                      The damages for the non-essential patent, the
10:30:26
         22
             '654, are $294,383.
10:30:29
        23
                      For a total of $1,130,974, based on the existing
10:30:35
10:30:42
        24
            licenses.
            Q. Okay. And that's -- that's the calculations that you
10:30:43
        25
```

```
actually made, correct?
         1
10:30:47
                 That's right.
10:30:49
             Α.
             Q. Let's look at Slide 3.
10:30:49
          3
                      And if you would, sort of take us through what you
          4
10:30:53
             did to ultimately reach your opinions.
10:30:57
             A. Yes, so it's really a five-step process, and we'll go
10:31:02
          6
         7
             through them briefly here, and then obviously implement
10:31:05
          8
             each one of the steps.
10:31:07
                      So the first step is valuing a license or what
10:31:09
             we're trying to do is imagine that instead of being in
10:31:14
        10
        11
             court here, that Pantech and OnePlus had negotiated a
10:31:17
        12
             license for the right to use Pantech's patents. That's
10:31:21
             sometimes called a hypothetical license because it didn't
10:31:25
        13
             really exist. If it did exist, there wouldn't be a
10:31:28
        14
             lawsuit.
        15
10:31:31
                      So it's like valuing a house where you don't know
10:31:32
        16
             the value, you have to look at similar houses and see how
10:31:35
        17
             they sell in the marketplace.
        18
10:31:37
                      So the key part of that process is picking things
        19
10:31:41
10:31:43
        20
             that are comparable. So the first step is to select
         21
             licenses that are comparable to the hypothetical license
10:31:46
         22
            between the parties.
10:31:52
         23
             Q. Okay. And then just keep walking us through Step
10:31:52
10:31:58
        24
            No. 2.
            A. Sure. So once you have the licenses, then you have to
10:31:58
        25
```

```
determine how much people paid in the marketplace for
10:32:01
         1
            Pantech's entire portfolio of patents; in other words, how
10:32:04
            much did the house sell for in the real world.
10:32:07
            Q. Okay. And after that, what would you look for?
10:32:10
            A. Well, so a portfolio of patents is an entire collection
10:32:12
            of patents, and that's how firms like Pantech and OnePlus
10:32:15
         7
            negotiate for the right to use patents in the marketplace.
10:32:21
                      But in this case, we're not negotiating over an
         8
10:32:24
            entire portfolio. We're only negotiating over four patents
         9
10:32:27
10:32:31
        10
            within the portfolio.
        11
                      So, obviously, you don't get the entire value of
10:32:32
            your portfolio. You only get the value of those four
        12
10:32:35
10:32:38
        13
            patents in the portfolio. So we've got to find shares of
            the portfolio that are attributable to the three SEPs and
10:32:42
        14
        15
            the one NEP.
10:32:45
            Q. Let me pause here for a minute.
        16
10:32:47
                      So for No. 2, you're trying to identify like a
        17
10:32:49
            portfolio rate; is that right?
        18
10:32:55
            A. Yes, that's -- yes, exactly. A portfolio is the
        19
10:32:56
        20
            collection of all the patents.
10:33:00
        21
            Q. And because we don't have that full collection, we have
10:33:01
        22
             four patents in this case --
10:33:06
                      MR. FILBIN: Objection, leading.
        23
10:33:10
10:33:13
        24
                      THE COURT: Is there an objection?
10:33:14
        25
                      MR. FILBIN: Yes, Your Honor. Leading.
```

THE COURT: Why don't you just rephrase the 10:33:17 1 question? 10:33:18 2 MR. TIDWELL: Okay. 10:33:19 3 (By Mr. Tidwell) Why is -- I'm trying to understand Ο. 10:33:20 the importance of No. 3. Once you have the portfolio rate, 10:33:22 what's the importance of getting the royalty rate for the 10:33:27 patents that are in this lawsuit? 7 10:33:31 A. Well, anytime that you have a rate for a whole thing 10:33:32 8 but you only have to pay for part of that thing, then 10:33:40 you've got to figure out how to shrink it down. 10:33:43 10 11 So if I tell you the rate for a hotel room for an 10:33:45 entire week but you're only using it for three days, then 12 10:33:48 we have to shrink that rate down just for the three days 10:33:52 13 you're actually going to be in the hotel. 10:33:55 14 15 So in the same way here, we've got an entire 10:33:57 portfolio of patents that Pantech has. For example, 10:34:02 16 they've got over 30 standard essential patents that people 10:34:05 17 pay for, but there's only three of them that are at issue 18 10:34:08 in this case. 19 10:34:11 10:34:11 20 So we have to shrink that down and figure out how much should OnePlus pay for the three patents that are 21 10:34:15 22 actually at issue in this case, and the same thing for the 10:34:20 23 one NEP in this case. 10:34:23 24 Q. Let's look at the next question you're trying to 10:34:24 answer, which is No. 4. Can you explain that one to us? 10:34:27 25

Sure. Well, that's actually the easy part of this. 10:34:31 1 Because, remember, as we discussed previously, Pantech has 10:34:35 told us for each one of the patents how much it actually 10:34:39 3 sold. It ranges from a few hundred million dollars to over 10:34:43 a billion dollars, depending on the patent. 10:34:49 6 So we need a royalty rate for each one of the 10:34:51 individual patents. We're going to multiply that royalty 7 10:34:54 rate by the sales for each patent that infringe, and that 8 10:34:58 comes up with damages. We add it together, and then that's 10:35:03 the check that OnePlus has to write to Pantech. 10:35:06 10 11 Q. Okay. And what's the next step, No. 5? Can you 10:35:11 explain that to us? 10:35:15 12 A. Sure. So one of the things that's true -- it's 10:35:17 13 important to understand about these proceedings -- is that 10:35:20 14 15 we're going to be working from real-world licenses. And in 10:35:22 a real-world license, no one knows in a real-world license 16 10:35:25 whether the patents are actually valid and infringed. 10:35:29 17 18 So we work out a deal and you tell me that you've 10:35:32 got a valid patent and you're going to sue me. And I say, 19 10:35:36 20 well, I don't want you to sue me, but I also think there's 10:35:40 reasons why your patent might not be valid and infringed. 21 10:35:43 22 And so I'm going to ask you to offer me a discount because 10:35:46 23 you might be wrong. I'm not going to pay the full rate 10:35:49 10:35:52 24 because I don't know your patent is valid and infringed. 25 So in the real world, licenses reflect a discount 10:35:55

```
that reflect uncertainty about whether a patent is valid
          1
10:35:57
             and infringed. And that's true for every license.
10:36:00
          2
10:36:02
                      Now, what's different about these proceedings is
          3
             that it's been determined that the patent -- Pantech
10:36:05
          4
             patents that are at issue in this case are, in fact, valid
10:36:09
             and infringed. No license had the benefit of that
10:36:12
          6
             knowledge. But we in court here have the benefit of
          7
10:36:17
          8
             knowing that these patents are valid and infringed.
10:36:20
                      So you pay more, if you know the patent is valid
10:36:23
             and infringed, than if you don't know it's valid and
10:36:26
         10
         11
             infringed. So the last step is to increase the payment for
10:36:29
             the fact that we're in court --
         12
10:36:33
10:36:35
         13
                      MR. FILBIN: Objection, Your Honor.
         14
            A. -- having --
10:36:36
         15
                      THE COURT: Hold on.
10:36:37
10:36:38
         16
                      THE WITNESS: I'm sorry.
                      THE COURT: What's the objection?
10:36:39
         17
         18
                      MR. FILBIN: Can we sidebar, please?
10:36:40
                      THE COURT: Yes.
         19
10:36:46
10:36:47
         20
                      (Bench conference.)
         21
                      MR. FILBIN: Your Honor, the testimony is coming
10:36:55
         22
             in as not -- you may, it's a you are. It should all be
10:36:59
         23
             stricken.
10:37:02
10:37:03
         24
                      THE COURT: I think that's what we agreed to.
         25
                      MR. TIDWELL: Yeah, I wasn't trying to get -- I
10:37:06
```

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can clean it up. I mean...
10:37:08
         1
          2
                      THE COURT: Okay. You'll need to.
10:37:11
                      MR. TIDWELL: Okay.
10:37:13
          3
                      (Bench conference concluded.)
10:37:19
                 (By Mr. Tidwell) Dr. Putnam, just to clean something
          5
             Q.
10:37:23
             up, this last category is something that a jury can make an
10:37:27
             adjustment but is not required to make an adjustment; is
         7
10:37:34
            that fair?
         8
10:37:34
             A. Well, if you're asking me if it's a legal requirement,
10:37:37
             then the answer is no. It's a financial requirement in the
10:37:40
        10
        11
             same way that if you know land has oil on it --
10:37:43
        12
                      MR. FILBIN: Your Honor, objection. Move to
10:37:45
10:37:49
        13
             strike.
                      THE COURT: Yeah, I'm going to strike that. I'll
10:37:49
        14
        15
             strike that answer and instruct the jury to disregard it.
10:37:54
             Q. (By Mr. Tidwell) Let me try and rephrase it.
        16
10:37:59
        17
                      From the standpoint of the questions that are
10:38:01
             asked to the jury, is it -- you understand that is an
        18
10:38:04
             option that the jury can add, correct?
        19
10:38:09
10:38:14
        20
             A. Sure.
             Q. Okay. Let me -- let's move from beyond the steps to
         21
10:38:16
         22
             discuss some of the guidelines that you as an economist
10:38:34
        23
            have to operate under. And what I'd like to do is look at
10:38:41
        24
             Slide No. 8, and let's discuss what's called this
10:38:44
            hypothetical license.
10:38:54
        25
```

10:38:55	1	And, if you can, explain to the jury why this is
10:38:59	2	even relevant or why it's important.
10:39:00	3	A. Well, you've heard the idea that patents are analogous
10:39:06	4	to valuing a house or getting a house appraisal. And so
10:39:09	5	when you get a house appraisal, you write down certain
10:39:12	6	characteristics of the house, and then you try to find
10:39:14	7	other houses that are like your house.
10:39:16	8	Like if it's a four-bedroom house, then you look
10:39:19	9	for other four-bedroom houses. And if it's located in
10:39:22	10	Texarkana, then you look for houses in Texarkana and that
10:39:25	11	sort of thing.
10:39:25	12	So we're looking for characteristics of the
10:39:28	13	license between Pantech and OnePlus, and then we're going
10:39:31	14	to look for other licenses in the real world that have the
10:39:34	15	same characteristics.
10:39:35	16	So on the slide that I've shown right here are
10:39:39	17	nine characteristics that are true of the hypothetical
10:39:45	18	license between Pantech and OnePlus and that should also be
10:39:48	19	true of the actual licenses that we're going to be
10:39:53	20	examining to determine which of those licenses are
10:39:54	21	comparable.
10:39:56	22	Q. So on the far left, you have something called technical
10:40:01	23	comparability and economic comparability. Can you explain
10:40:07	24	the difference in those two to the jury?
10:40:10	25	A. Yes. So for a license to be useful, it has to be

useful in two broad categories. 10:40:13 1 2 One is it's got to convey the rights to the same 10:40:15 or similar technology. Because if the technology is 10:40:19 3 different, then you can't learn anything from the price in 10:40:22 the license. So that is technically -- technical 5 10:40:25 comparability. 10:40:29 6 7 And then you have to look at the economic 10:40:30 circumstances that the parties are involved in, as well as 10:40:32 8 the terms of the license. And those have to be comparable 10:40:34 10:40:38 10 also. So we have these two broad categories, and then 10:40:38 11 we'll go through the individual details to make sure that 12 10:40:42 the actual licenses conform to the hypothetical license. 10:40:44 13 Q. So let's start with the first one. It says standards. 10:40:50 14 15 What is it that -- as you're looking for comparable 10:40:52 licenses, what about the standards is it that you're 16 10:40:56 looking for? 10:40:59 17 A. Well, the Pantech products that are at issue in this 18 10:41:00 case and the -- I mean, the Pantech patents that are at 19 10:41:03 10:41:06 20 issue in this case and the OnePlus products are products that practice the LTE or 4G and the 5G standards. 21 10:41:10 So those are standards that are used so that 22 10:41:16 23 phones can talk to each other. It wouldn't do any good to 10:41:19 10:41:22 24 look at an earlier generation license because that wouldn't tell us about the correct standards. 10:41:26 25

```
O. If I'm understanding, are you looking for standards
10:41:28
         1
            that's 2G?
10:41:33
            A. No. So, for example, the iPhone when it originally
10:41:34
            came out in 2007 was a 2G device. The licenses covering
10:41:37
            the iPhone wouldn't be useful to us today in analyzing
10:41:45
            OnePlus's 4 and 5G use of Pantech's 4 and 5G patents.
10:41:50
            Q. The next category under technical comparability, it
         7
10:41:55
            says licensed patents. What's the purpose of that?
10:42:00
         8
            A. Well, again, we're looking for licenses where the --
10:42:05
            one of two things is true, either the licensor, the person
10:42:10
        10
        11
            who did the licensing, actually owned the same patents that
10:42:13
        12
            are at issue in this case, the four patents, or they own
10:42:17
            patents that are similar enough that we can say, well, we
10:42:20
        13
            can learn something about the value of the technology even
10:42:23
        14
            though it's not identically the same.
        15
10:42:26
            Q. Let's move over to economic comparability. And I want
10:42:30
        16
            to spend a little time on this slide because I think what
10:42:36
        17
            you're -- what's happening here is you're setting up sort
        18
10:42:40
            of the comparability if you were looking for houses.
        19
10:42:43
            that fair?
10:42:49
        20
                     MR. FILBIN: Objection, leading.
        21
10:42:50
        22
                     THE COURT: I'll sustain that.
10:42:52
        23
            Q. (By Mr. Tidwell) What I'd like to do, if you don't
10:42:55
10:42:56
        24
            mind, is spend a little time looking at this slide because
            I think it will be important. So I'm going to ask you some
10:43:03
        25
```

more questions about it, okay? 10:43:07 1 Α. Sure. 10:43:08 Q. Can you explain under the economic comparability the 10:43:08 3 importance of having something identified as patent 10:43:12 licensor? 10:43:17 Sure. Remember, in the -- our overall goal is to say 10:43:18 6 how much should OnePlus pay for Pantech's patents. Okay. 7 10:43:24 So in that hypothetical license, Pantech is the 8 10:43:30 9 licensor and OnePlus is the licensee. And so in trying to 10:43:35 figure out that explanation, we want to look for other 10:43:37 10 11 licenses ideally where Pantech is the licensor because what 10:43:40 people behave similarly from contract to contract. 12 10:43:46 And so if you want to say a license is comparable, 10:43:50 13 we want to look for licenses where Pantech has already 10:43:53 14 15 licensed its patents. And we're going to assume that it 10:44:00 would do the same thing when it's licensing with OnePlus. 10:44:03 16 17 In fact, as it turns out, it's obligated to do that. 10:44:06 When you identified the licensor, can you identify the 18 10:44:08 two entities that you said that you were looking for? 19 10:44:14 10:44:17 20 A. Yes. The two entities are Pantech Corp and Pantech Wireless, and that is distinguished from earlier versions 21 10:44:23 22 of Pantech -- we heard some about this yesterday --10:44:26 23 Pantech, Inc., which is what's called a predecessor, and 10:44:31 10:44:36 24 Pantech Co or Company Limited, which is an even earlier 25 predecessor. 10:44:41

10:44:42	1	So we're going to be focused ideally on finding
10:44:45	2	licenses where Pantech Corp and Pantech Wireless, the folks
10:44:49	3	who are actually sitting in this courtroom, were the
10:44:51	4	licensors.
10:44:54	5	Q. What about the payment structure, can you explain what
10:44:57	6	you mean by running royalty?
10:45:03	7	A. Yes. As a broad category, there's two types of
10:45:06	8	licenses. There's a running royalty license where you've
10:45:08	9	got to pay for every phone that you sell. You pay a
10:45:11	10	royalty for the use of the technology. And then there's
10:45:13	11	lump-sum licenses where you pay a fixed fee, and then you
10:45:17	12	can sell as many phones as you want.
10:45:20	13	Like when you go to a restaurant, you can either
10:45:23	14	pay a-la-carte, you pay for every single item on the menu
10:45:28	15	or you pay for a buffet, you pay a fixed amount and you can
10:45:31	16	order off the buffet as much as you want and go back as
10:45:37	17	many times as you want.
10:45:38	18	We're looking for a running royalty license
10:45:39	19	because OnePlus has to pay for every single phone that it
10:45:44	20	sold for every patent that it used. And so that's going to
10:45:47	21	be the easiest way to measure the damages that OnePlus
10:45:50	22	should pay to Pantech.
10:45:51	23	Q. What about the geographic scope, what's the
10:45:55	24	significance of having a limitation on that?
10:45:57	25	A. Well, the only point is we want to look for licenses

where there were U.S. patent rights conveyed. We don't 1 10:46:04 want to look for what they paid in France or Uganda where 10:46:07 they might have different patent rights, so we're going to 10:46:11 look for U.S. licenses. 10:46:14 Q. Can you explain what you mean by license type? When 10:46:16 you say one-way, bare patent license, what does that mean? 10:46:21 7 A. Sure. Licenses sound like they could be simple. Like 10:46:27 I sell a phone, I pay you a dollar. But licenses can 8 10:46:30 actually be complicated. 10:46:35 So, for example, it's often the case that we'll 10:46:40 10 11 enter into a deal where we're both selling phones, we both 10:46:42 have patents, and we have to pay each other money. That's 12 10:46:46 called a cross-license. 10:46:50 13 But in a cross-license, it's hard to figure out 10:46:51 14 15 how much is being paid from one side to the other, because 10:46:54 all you see is the net that they're paying each other. 16 10:46:57 that's confusing. 10:46:57 17 Other times, when people are entering into a 18 10:47:00 license, it's costly to negotiate and they do it as part of 19 10:47:03 10:47:06 20 a larger deal. Maybe they're selling patents or maybe there's technical collaboration between them. They're 21 10:47:09 22 learning know-how or they're exchanging other things. 10:47:12 23 So we're looking ideally for those licenses that 10:47:15 10:47:18 24 are one-way, the patents are only going one way and the money is only going the other way, and there's no other 10:47:21 25

```
side deals or complications involving other payments that
         1
10:47:24
            make it hard to figure out what's the royalty per patent
10:47:30
            that's being paid.
10:47:34
            Q. Okay. The licensed product, it says handsets. I think
10:47:37
            we know, I just want to make sure. What is that?
10:47:41
            A. A handset is just another common word for a smartphone.
10:47:43
         7
            Q. Okay. And the negotiation circumstances, it says fair
10:47:47
            market value. Can you explain that?
10:47:53
            A. Yes. So as an economist, I want to focus on the real
10:47:54
            world, what do people actually do in the real world.
10:48:02
        10
        11
                      But just because something occurs in the real
10:48:05
        12
            world doesn't mean that it's fair market value. And we'll
10:48:08
            talk about this a little bit more down the road in more
10:48:10
        13
            detail because it's actually quite important, and there's
10:48:13
        14
            several criteria that determine whether a transaction that
        15
10:48:17
            we observe in the real world is a fair market value
        16
10:48:20
            transaction.
10:48:23
        17
                      So if we're going to be fair to both sides, we
        18
10:48:24
            want to use fair market value transactions and not just any
        19
10:48:27
10:48:31
        20
            transaction.
        21
            Q. Okay. So let me -- let's move forward past sort of the
10:48:32
        22
            comparability items that you've set out here.
10:48:36
        23
                      MR. TIDWELL: Let's move to PDX-6.9.
10:48:43
        24
            Q. (By Mr. Tidwell) And I want to ask you about that.
10:48:46
            Can you -- we're looking at PDX-6-9. Can you explain what
10:48:48
        25
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the Georgia-Pacific factors are and why we're even talking 10:48:53 1 about it here? 10:48:58 10:48:59 A. Sure. The -- so Georgia-Pacific is a company 3 located -- headquartered in Georgia, and they're a forest 10:49:03 products company. They sell a lot of paper. They were 10:49:06 involved in a patent suit back in the '70s with a company 10:49:09 6 7 called U.S. Plywood. 10:49:12 And there was a judge who had to figure out the 8 10:49:13 damages. And he said: Well, I don't know how to figure 10:49:17 9 out damages, but I'm going to go look at previous cases and 10:49:19 10 11 I'm going to list all the things that I think I should 10:49:24 12 think about in order to figure out damages. 10:49:26 And so he listed 15 categories of evidence that he 10:49:30 13 thought were important in analyzing patent damages. 10:49:33 14 15 those became known over time as the Georgia-Pacific 10:49:37 factors, okay? There's 15. 16 10:49:42 17 The most important of these factors are the first 10:49:45 18 two, which are, again, the real world. How much did the 10:49:46 patentee actually get for the patents that it's suing on in 19 10:49:53 this case? And that's Factor 1. 10:49:59 20 21 And Factor 2 is how much did the infringer pay for 10:50:01 22 technology that is similar to the patents that it's being 10:50:10 23 sued on in this case? So it's a focus on the real world. 10:50:13 10:50:17 24 And that's really the point. 25 Q. Okay. And sort of back to where you set up the 10:50:19

hypothetical. What's the importance of the hypothetical 10:50:25 1 negotiation in the Georgia-Pacific factors? 10:50:30 A. Well, Factor 15 asked the following question: If the 10:50:32 3 parties had been bargaining instead of suing each other, 10:50:35 what would they have agreed to if they are both being 10:50:39 reasonable and prudent? 10:50:43 6 7 And so the assumption that we're making is that 10:50:44 under Factor 15, when we ask how much would they have 8 10:50:48 agreed to, is they would have agreed to the same thing that 10:50:52 people in the real world did agree to, which is what we're 10:50:56 10 going to discuss under Factors 1 and 2. 11 10:50:58 12 MR. TIDWELL: Let's move to PDX-No. 10. 10:51:05 10:51:08 13 (By Mr. Tidwell) And one more item I want you to sort of explain to the jury before we get started in the 10:51:11 14 15 comparison, can you explain in a little more detail what 10:51:13 are the considerations you take into place when trying to 10:51:17 16 analyze fair market value? 10:51:22 17 So I mentioned the importance of real-world 18 10:51:25 transactions, but it's important that they be fair market 19 10:51:28 10:51:31 20 value transactions. So there are things that can occur in the real world that are not fair and that are un -- make 21 10:51:34 22 the transaction unreliable. 10:51:38 23 So the overall criteria -- the overall rule is the 10:51:39 24 following, given at the bottom of the slide. It says that 10:51:44 25 fair market value is the price at which a property would 10:51:47

change hands between a willing buyer and a willing 10:51:51 1 seller -- seller, neither being under any compulsion to buy 10:51:54 or to sell and both having reasonable knowledge of relevant 10:51:59 3 facts. 10:52:03 So if we break that down, there's really four 5 10:52:03 criteria that a fair market value transaction has to meet. 10:52:07 6 7 First of all, the parties have to be willing. 10:52:11 Okay. There can't be coercion. And so I can't say sell me 8 10:52:14 your house, and by the way, I'm pointing a gun at your head 10:52:19 because the price that you would sell it to me for is not 10:52:23 10 11 the right price. Obviously, that's a ridiculous example, 10:52:26 but you can think of more realistic examples. 12 10:52:29 For example, the folks in North Carolina whose 10:52:33 13 houses just got flooded. The price they would sell their 14 10:52:37 15 house for now when they are desperate and don't have money 10:52:40 and their house has been ruined is not the fair market 16 10:52:43 value price. 10:52:45 17 Second, both parties have to be informed. So if 18 10:52:46 I'm selling you my house, and I know that it's been riddled 19 10:52:49 20 with termites and it's going to fall down next week, but 10:52:53 you don't know that, the price that you pay for my house is 21 10:52:57 not the right price because I'm informed that it's got 22 10:53:00 23 termites but you're not informed. So both parties have to 10:53:03 10:53:06 24 have reasonable knowledge of the facts. That's why you get your house inspected.

10:53:12

25

Third, it has to be arm's length, and that means 10:53:14 1 there's no sweetheart deal. So, for example, if I sell my 10:53:17 2 house and I sell it to my daughter and I say, sweetheart, 10:53:19 you can have it for just a dollar, then you as an 10:53:19 accountant wouldn't look at that and say, well, I guess 10:53:24 Dr. Putnam's house is worth a dollar. You would say, no, 10:53:27 he gave it to his daughter because he loves her. That's a 7 10:53:32 sweetheart deal. They weren't bargaining at arm's length. 8 10:53:36 So the parties can't be related. They can't have side 10:53:39 relationships. 10:53:42 10 11 And then the last point is there has to be an 10:53:42 actual exchange. The property has to change hands. So if 12 10:53:45 I sell you my house, I have to -- I can't just say, well, 10:53:48 13 I'm offering you my house for a hundred thousand dollars. 10:53:49 14 That's an offer. But if you don't accept and the house 15 10:53:52 doesn't change hands, the price isn't a hundred thousand 16 10:53:55 dollars. We have to agree on a price. The house has to 10:54:00 17 change hands, and then that's the price that is fair market 18 10:54:03 value. 19 10:54:06 10:54:06 20 So these are the criteria that you have to apply to these various licenses to determine that just because 21 10:54:08 22 they occurred in the actual world, are they actually fair 10:54:11 23 market value. 10:54:14 24 Q. Did you attempt to look at licenses that Pantech Corp 10:54:15 or Pantech Wireless, the Plaintiffs in this case, had 10:54:25 25

```
entered into with other companies?
         1
10:54:27
            A. I did.
10:54:29
                      MR. TIDWELL: Let's look at Slide No. 11.
10:54:35
          3
                (By Mr. Tidwell) And I'll ask you to -- first, is this
             Q.
10:54:37
             a summary of sort of those licenses that you had reviewed?
10:54:41
                Yes.
10:54:44
            Α.
         7
             Q. And I just want to be clear, did you review -- did you
10:54:44
            read each one of these contracts?
         8
10:54:51
            A. Each one, yes.
10:54:52
             Q. Okay. And so what is -- as we're looking at PDX-6-11,
10:54:54
         10
         11
             can you first describe to us what this document is
10:55:01
             attempting to do?
         12
10:55:04
             A. Yes. So we went through the criteria in a fair amount
10:55:05
         13
             of detail, but the nice thing about a slide like this is it
         14
10:55:09
         15
             actually explains the summary of the results in a pretty
10:55:14
             succinct fashion.
         16
10:55:18
                      So just for the record, the rows of this matrix
         17
10:55:19
             are the eight criteria that I've described previously for
         18
10:55:23
             technical and economic comparability. And then the columns
         19
10:55:30
         20
             are the five Pantech Corp licenses that I read and analyzed
10:55:33
             and --
         21
10:55:40
         22
             Q. Hold on just a second --
10:55:40
         23
            Α.
                Sure.
10:55:42
         24
             Q. -- because we're about to go into these licenses.
10:55:42
         25
10:55:46
                      MR. TIDWELL: Your Honor, I think it's probably
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appropriate that we seal the courtroom.
         1
10:55:48
          2
                      THE COURT: All right. We'll seal the courtroom
10:55:49
             at this time.
10:55:52
         3
                      Anyone not subject to the protective order or an
          4
10:55:53
             attorney or expert witness working on the case will need to
          5
10:55:56
             excuse themselves.
10:55:59
          6
          7
                      (Courtroom sealed.)
10:56:00
                      (This portion of the transcript is Sealed and
          8
10:56:00
          9
                      filed under separate cover as Sealed Portion
10:56:00
11:35:35
        10
                      No. 4.)
        11
                      (Courtroom unsealed.)
11:35:35
                 (By Mr. Tidwell) How do you go about determining
        12
11:35:37
11:35:39
        13
             the -- or breaking down the portfolio rate and reaching a
             decision about what the royalty rate is for these patents
        14
11:35:44
             in this case? How do you do that?
        15
11:35:47
             A. Well, this process is something called apportionment,
        16
11:35:50
             okay? And -- which sounds like a $64 word for something
11:35:57
        17
             that you do each Thanksqiving when you carve up a turkey.
        18
11:36:02
             You've got a whole turkey, and you got to figure out the
        19
11:36:06
11:36:09
        20
             pieces that go to each one of the people at your
             Thanksgiving dinner, okay?
         21
11:36:12
         22
                      And you do that because you follow an algorithm
11:36:15
        23
             and you say, well, I've got a teenage son, he's going to
11:36:17
        24
             get a big piece. I've got, you know, my granddaughter,
11:36:20
             she's three months old. She's just going to get a taste.
11:36:25
        25
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```
And so we're going to go through the same kind of
         1
11:36:28
            process here. The process involves something called
11:36:31
          2
             citation analysis.
11:36:33
             Q. So looking at PDX-6-22, is this sort of the
11:36:35
             introduction of what you're trying to do?
11:36:40
            A. Yes. So we know that Pantech's entire portfolio of
11:36:42
             SEPs is 0.50 percent. That's the portfolio rate that we've
         7
11:36:46
         8
            determined from the four agreements. But we want to figure
11:36:51
             out what the value for the three SEPs is, which is only a
11:36:56
            portion of that .50 percent rate.
11:37:01
        10
             Q. And so why did you use the number 29 in relationship to
11:37:04
        11
        12
            three?
11:37:10
11:37:11
        13
            A. Because we determined on a patent family basis that
            there are 29 other families that are considered SEPs that
11:37:19
        14
        15
             Pantech owns for which it receives royalties that -- for
11:37:26
             which OnePlus is not paying in these proceedings.
        16
11:37:30
                      MR. TIDWELL: Let's look at PDX-6-23.
11:37:35
        17
        18
             Q. (By Mr. Tidwell) Does this explain at a high level how
11:37:39
        19
            you went about this?
11:37:44
        20
            A. Yes.
11:37:45
         21
             Q. Can you explain in general what this is and what you're
11:37:46
         22
            doing?
11:37:49
        23
            A. Right. So in -- just for the record, in Column 1,
11:37:50
        24
            we've listed the three SEP families, the '839, the '954,
11:37:56
11:38:01
        25
            and the '247 families. And we've analyzed each one of
```

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those families.
11:38:04
          1
                      Let me just explain for a second what a family is.
          2
11:38:08
                      A family consists of the same documents that
11:38:13
          3
             protect the same invention in multiple countries.
11:38:18
                      MR. FILBIN: Objection, Your Honor.
11:38:22
          5
          6
                      THE COURT: What's the objection?
11:38:23
          7
                      MR. FILBIN: Dr. Putnam's testifying outside the
11:38:24
             scope of his expertise.
          8
11:38:27
                      THE COURT: All right.
11:38:28
                      MR. TIDWELL: Maybe I can set the stage.
11:38:30
         10
         11
                      THE COURT: All right.
11:38:33
         12
                 (By Mr. Tidwell) Dr. Putnam, do you -- have you done
11:38:34
             Q.
             citation rankings in the past?
11:38:38
         13
             A. Yes.
11:38:43
         14
             Q. And is that something an economist with special
         15
11:38:43
             training to do, does in citation ranking dealing with
11:38:47
         16
             patents?
         17
11:38:54
             A. Yes.
         18
11:38:55
                And do those citation rankings help value a patent?
         19
             Q.
11:38:56
11:39:01
         20
             A. Yes.
         21
             Q. Okay.
11:39:03
                      MR. TIDWELL: Your Honor, may I proceed?
         22
11:39:03
         23
                      THE COURT: Any further objection?
11:39:05
11:39:06
         24
                      MR. FILBIN: Your Honor, as long as Dr. Putnam
             doesn't testify about legal matters, then it's fine.
11:39:09
         25
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THE COURT: All right. So no legal opinions.
11:39:12
         1
                 (By Mr. Tidwell) So, if you would, you were explaining
11:39:17
         2
            that for -- let's just take the '839. Do you just count
11:39:23
            the '839, or do you count the '839 family of patents?
11:39:26
            A. It's -- well, for multiple reasons, you count the
11:39:32
            family of patents.
11:39:35
         7
            Q. Can you explain why, as an economist, that you would
11:39:36
            want to do that?
         8
11:39:39
            A. Well, in the -- for two reasons.
11:39:41
                      First of all, the FRAND commitment -- remember,
11:39:47
        10
        11
            the promise that you made not to jack up your price --
11:39:49
        12
            applies to every member of a family. So the family is
11:39:53
            treated as a whole for the purposes of this commitment.
11:39:57
        13
                      Secondly, multiple documents in that family may
11:40:01
        14
            contain the same specification, which is the description of
        15
11:40:07
            how to make the invention. That's what you have to
11:40:12
        16
             disclose to the Patent Office in order to --
11:40:15
        17
        18
                      MR. FILBIN: Objection, Your Honor. He's
11:40:19
            continuing to testify as a legal expert.
        19
11:40:22
11:40:25
        20
                      MR. TIDWELL: Your Honor, I don't believe he's
            rendering legal opinion. He's testifying as an economist,
        21
11:40:26
        22
            how he goes about doing the work.
11:40:30
        23
                      THE COURT: Well, I think the answer to the last
11:40:32
11:40:34
        24
            question sort of suggests what you -- what you have to do,
            which suggests some requirement that you comply with, you
11:40:41
        25
```

```
know, a regulatory framework or a legal requirement.
         1
11:40:43
          2
                      So let's clarify the question, and maybe break it
11:40:48
             up so that we don't get such a narrative answer.
11:40:51
         3
             Q. (By Mr. Tidwell) Dr. Putnam, let me phrase the
11:40:54
             question from the sense of as an economist, what is the
11:41:00
            purpose of the forward citations, and we'll try and stick
11:41:08
         7
             to your opinions as an economist and why that's important
11:41:11
         8
            to you.
11:41:16
                      If you could, can you give us the history of how
11:41:17
             forward citations even came about?
11:41:22
        10
            A. Yes. So let's just, again, review what a citation is.
11:41:25
        11
        12
                      When a patent examiner examines an application,
11:41:33
             the examiner has to determine whether the application
11:41:44
        13
            represents an invention that is --
11:41:48
        14
        15
                      MR. FILBIN: Your Honor, objection. It's the same
11:41:50
11:41:52
        16
            issue.
        17
                     MR. TIDWELL: Can I explain, Your Honor? I
11:41:53
        18
            think --
11:41:55
        19
                      THE COURT: Can you explain what? I mean --
11:41:55
11:41:57
        20
                      MR. TIDWELL: I think he's trying to give the
            historical background of how forward citations came about
         21
11:41:59
        22
             for economists.
11:42:04
        23
                      THE COURT: Okay.
11:42:05
11:42:05
        24
                     MR. TIDWELL: And we'll try and keep it at a high
            level, but that's what he's trying to explain.
11:42:08
        25
```

11:42:10	1	THE COURT: All right. So if you can sort of
11:42:14	2	cabin the question a little bit and make it clear he's not
11:42:20	3	talking about what any patentee's requirement is under the
11:42:28	4	law to obtain a patent or just make it clear he's
11:42:32	5	discussing this from an economist's point of view.
11:42:35	6	MR. TIDWELL: I will.
11:42:36	7	Q. (By Mr. Tidwell) Dr. Putnam, I want to make clear what
11:42:38	8	I'd like for you to describe is, as an economist, how it is
11:42:46	9	y'all decided as economists to even use this concept
11:42:49	10	forward citations, explaining sort of the history of it and
11:42:55	11	how it occurred without giving sort of legal implications.
11:42:58	12	A. There's a thing called citations. Sounds like it's a
11:43:09	13	magic word. An examiner in examining the application gives
11:43:15	14	a citation to earlier patents. We see citations in many
11:43:24	15	contexts. You see them at the end of scientific papers.
11:43:28	16	What's happened before, what else should you go read.
11:43:33	17	Economists got the idea back about 1990 that if
11:43:40	18	you count the number of citations that an earlier patent
11:43:45	19	receives, that might be an indicator of how important it is
11:43:49	20	or how valuable it is.
11:43:53	21	And so they did many, many studies, hundreds of
11:43:57	22	studies to look up and see, is the number of citations that
11:44:02	23	are received by an earlier patent correlated with the value
11:44:06	24	of that patent? More citations, higher value. The answer
11:44:12	25	to that question is yes, and confirmed hundreds of times.

```
The purpose of this table is based on that
         1
11:44:20
            research to count the number of citations and translate
11:44:24
          2
             that to the share of Pantech's portfolio value that's
11:44:33
          3
             accounted for by the three SEPs in this case.
11:44:37
                      I can go through that if you want.
11:44:43
             Q. We can -- so you -- looking at PDX-6-23, did you reach
11:44:46
          6
         7
             a share percentage for all three of those?
11:44:53
         8
            Α.
                Yes.
11:44:58
                And is that circled here, .21?
             Q.
11:44:58
                That's the total for the three.
11:45:02
        10
            Α.
        11
                For the three.
11:45:04
             Ο.
            A. And then the individuals are shown immediately above
        12
11:45:05
            that. So the share of the total Pantech portfolio is
11:45:07
        13
             2 percent for the '839 family, 3 percent for the '954
        14
11:45:12
             family, 15 percent for the '247 family, for a total of 21
        15
11:45:17
            percent for the three SEPs in this case out of the total
        16
11:45:23
             Pantech portfolio.
11:45:29
        17
                      MR. TIDWELL: Let's look at PDX-6-25.
        18
11:45:31
             Q. (By Mr. Tidwell) Does this summarize sort of where you
        19
11:45:34
        20
             landed after doing the citation analysis?
11:45:36
            A. Yes. So let's take, for example, the '247 patent,
         21
11:45:43
         22
             which is the second patent shown here. The Pantech
11:45:47
        23
            portfolio is the -- the rate is .50 percent. We said that
11:45:52
        24
             the '247 patent was 15 percent of that value. 15 percent
11:45:59
             of .5 percent is 0.75 percent royalty rate for the '247
11:46:06
        25
```

```
patent, and the same for the other four patents.
          1
11:46:17
          2
                      So all this to say is that we have gotten the
11:46:21
            result that we need, which is what's the royalty rate for
11:46:24
          3
            the four patents at issue in this case based on the fair
11:46:28
            market value of Pantech's entire portfolio.
11:46:31
             Q. Okay.
11:46:34
          7
                      MR. TIDWELL: Let's look at PDX-6-26.
11:46:36
             Q. (By Mr. Tidwell) We're sort of back to where we were
         8
11:46:40
             at the beginning. Does this slide represent your damages
11:46:42
             for the SEPs and damages for the NEPs?
11:46:49
         10
            A. Yes.
11:46:53
         11
         12
                      MR. TIDWELL: And -- and let's go to the next
11:46:56
            slide.
11:46:58
         13
            Q. (By Mr. Tidwell) And this is where we are. This is
         14
11:46:59
         15
            where we started, correct?
11:47:01
            A. That's correct.
11:47:03
         16
             Q. Okay. And, to be clear, the additional damages, if
11:47:07
         17
             any, to remove the uncertainty discounts is not something
         18
11:47:12
             that you're calculating here, correct?
         19
11:47:19
            A. That's correct.
11:47:22
         20
         21
            Q. Okay.
11:47:24
         22
                      MR. TIDWELL: Pass the witness.
11:47:24
         23
                      MR. FILBIN: Your Honor, sidebar?
11:47:26
11:47:28
         24
                      THE COURT: Yes.
         25
                      (Bench conference.)
11:47:29
```

```
MR. FILBIN: Your Honor, we move to strike
         1
11:47:43
            Dr. Putnam's testimony in its entirety regarding the NEP
11:47:45
          2
             damages. He offered no basis for his number. He just
11:47:49
          3
             flashed up a number.
11:47:55
                      MR. TIDWELL: He testified this is how he got to
          5
11:48:02
            the NEPs. I can clarify it if the Court wants me to.
11:48:04
          6
         7
                      THE COURT: I'll let you deal with it on cross.
11:48:07
             I'm not going to strike it until you've gone through the
         8
11:48:10
             cross. And Mr. Tidwell will be entitled to redirect.
11:48:14
                      But -- now, I think you should just handle it
11:48:16
        10
        11
            however you think you should on cross.
11:48:18
        12
                      MR. FILBIN: Okay.
11:48:23
11:48:25
        13
                      THE COURT: How much time do you have? Would now
            be a better time to take a break?
        14
11:48:27
        15
                      MR. FILBIN: Yes, Your Honor.
11:48:29
                      THE COURT: Okay. Let's go ahead and take our
        16
11:48:29
            break.
11:48:31
        17
                      (Bench conference concluded.)
        18
11:48:35
                      THE COURT: Ladies and gentlemen of the jury,
        19
11:48:35
        20
             given the hour, I think it makes sense for us to go ahead
11:48:36
             and have lunch now before we proceed to the
        21
11:48:42
         22
             cross-examination of the witness. So we'll be in recess
11:48:47
         23
             about an hour, perhaps a little bit longer.
11:48:49
11:48:53
        24
                      As a reminder, don't discuss the case among
             yourselves. Don't permit it to be discussed in your
11:48:56
        25
```

```
presence. Don't do any research about any matter
11:48:58
          1
          2
             associated with the case on your own, and don't post
11:49:01
             anything about your involvement as a juror in this case.
11:49:07
          3
                      Enjoy your lunch. And we'll get you back into the
          4
11:49:10
             courtroom probably about 1:00 o'clock, maybe a little bit
          5
11:49:15
          6
             before.
11:49:17
          7
                      COURT SECURITY OFFICER: All rise.
11:49:18
          8
                       (Jury out.)
11:49:21
          9
                      THE COURT: All right. You may step down, sir.
11:49:24
                      THE WITNESS: Thank you.
11:49:56
         10
         11
                      THE COURT: We'll recess for lunch.
11:49:56
         12
                      How long do you expect your cross to take,
11:49:58
             Mr. Filbin?
11:50:00
         13
                      MR. AIRAN: We've got a hook at 40 minutes.
11:50:05
         14
         15
                      MR. FILBIN: 40 minutes.
11:50:08
                      THE COURT: You've got a hook at 40 minutes.
11:50:09
         16
             right. Good enough.
11:50:10
         17
         18
                       (Recess.)
11:55:31
                       (Jury out.)
         19
12:11:01
12:52:19
         20
                      COURT SECURITY OFFICER: All rise.
                      THE COURT: Mr. Goecke, if you would have the jury
         21
12:52:20
         22
             brought down, please.
12:52:25
         23
                      COURT SECURITY OFFICER: Please stand for the
12:52:32
         24
             jury.
12:54:25
         25
                      (Jury in.)
12:54:25
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```
THE COURT: Please be seated.
          1
12:54:26
          2
                      Mr. Filbin, at this time, you may cross-examine
12:55:02
            the witness.
12:55:04
          3
          4
                      MR. FILBIN: Thank you, Your Honor. May I
12:55:16
          5
             proceed?
12:55:18
          6
                      THE COURT: You may.
12:55:20
          7
                      MR. FILBIN: Thank you.
12:55:20
          8
                                     CROSS-EXAMINATION
12:55:28
             BY MR. FILBIN:
          9
12:55:28
             Q. Welcome back, Dr. Putnam, from lunch.
12:55:28
         10
                Thank you, Mr. Filbin.
12:55:28
         11
         12
            Q. Good to see you.
12:55:28
12:55:28
         13
            A. Likewise.
            Q. So before we broke for lunch, you concluded your direct
         14
12:55:32
         15
            examination, right?
12:55:33
             A. Yes.
         16
12:55:34
             Q. And you didn't offer any analysis or discussion
12:55:35
         17
             concerning your royalty rate for the '654 patent, correct?
         18
12:55:39
             A. It's analogized to the '247 patent, that's right.
         19
12:55:44
         20
            Q. Pardon me.
12:55:49
                      MR. FILBIN: Move to strike, Your Honor.
         21
12:55:54
         22
                      THE COURT: Well, I mean, he can -- I will -- I'll
12:55:56
         23
             grant that motion and strike the answer.
12:56:04
12:56:06
         24
                      Just ask the question again and see what the
             answer is.
12:56:11
         25
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```
O. (By Mr. Filbin) Dr. Putnam, yes or no, you didn't
         1
12:56:13
             offer any analysis or discussion concerning your royalty
12:56:15
            rate for the '654 patent, correct?
12:56:17
            A. I presented the rate as being the same as the rate for
12:56:20
             the '247 patent.
12:56:23
             Q. Okay. Now, we -- you discussed quite a few items, but
12:56:31
         6
         7
             let's just talk about the FRAND obligation for a moment.
12:56:36
         8
                      You understand the FRAND obligation does not go
12:56:39
             away when an SEP patent is sold to another company,
         9
12:56:42
12:56:46
        10
             correct?
            A. Yes.
        11
12:56:46
            Q. So Pantech has to honor the FRAND obligation attached
        12
12:56:47
12:56:51
        13
            to each one of the SEPs in this lawsuit, correct?
        14
            A. Of course.
12:56:53
        15
            Q. And that's an irrevocable undertaking, the FRAND
12:56:54
             obligation, correct?
        16
12:57:01
                That's my understanding, yes.
12:57:01
        17
            Α.
        18
             Q. Okay. So under the FRAND obligation, you can't ignore
12:57:03
        19
             what happened before you acquired a patent, correct, with
12:57:09
        20
             respect to its licensing activity?
12:57:15
             A. It's a general question, but in general, no.
        21
12:57:17
        22
                      MR. FILBIN: Your Honor, I think we -- for most of
12:57:27
        23
             this duration, we need to go under seal.
12:57:31
        24
                      THE COURT: All right. We'll seal the courtroom
12:57:33
            at this time.
12:57:35
        25
```

12:57:38	1	(Courtroom sealed.)
12:57:38	2	(This portion of the transcript is Sealed and
12:57:38	3	filed under separate cover as Sealed Portion
01:41:36	4	No. 5.)
01:41:36	5	(Courtroom unsealed.)
01:41:38	6	THE COURT: Mr. Airan.
01:41:38	7	MR. AIRAN: Yes, Your Honor. This motion will be
01:41:40	8	handled by my colleague Justin, introduce him to the Court,
01:41:44	9	Mr. Burnam is my colleague. He has not appeared before
01:41:49	10	you. I believe he's filed his pro hac vice, so he'll be
01:41:53	11	presenting the motion today.
01:41:54	12	THE COURT: Happy to hear from you, Mr. Burnam.
01:41:57	13	MR. BURNAM: Thank you, Your Honor.
01:42:02	14	Your Honor, may it please the Court. Justin
01:42:06	15	Burnam on behalf of OnePlus. There are two items I'd like
01:42:08	16	to raise in light of the close of Plaintiffs' case and the
01:42:13	17	close of Dr. Putnam's testimony.
01:42:13	18	The first is to give you highlights of our JMOL
01:42:17	19	motion and the second is to introduce a related instruction
01:42:19	20	that we're seeking.
01:42:20	21	Starting with the first item, we move for JMOL of
01:42:24	22	no damages in this retrial. It is Pantech's burden to
01:42:29	23	prove damages and Pantech has failed to present sufficient
01:42:32	24	evidence from which a reasonable jury could arrive at a
01:42:36	25	legally supported damages award. This is so at least

01:42:39	1	because the damages theory set forth by Pantech's damages
01:42:42	2	expert, Dr. Putnam, is legally flawed.
01:42:45	3	What I want to highlight now is that Dr. Putnam's
01:42:50	4	theory fails to apportion to the incremental value added by
01:42:54	5	the patented inventions.
01:42:57	6	There are multiple ways Dr. Putnam fails to
01:43:00	7	apportion, but I'm just going to highlight two of those now
01:43:03	8	and leave the others for the submission that we're filing
01:43:07	9	later.
01:43:07	10	First is that Dr. Putnam's forward citation
01:43:10	11	analysis attributes value to the asserted patents based not
01:43:14	12	only on citations to those patents but also to other
01:43:18	13	patents in their families.
01:43:19	14	And the second I want to highlight is that
01:43:22	15	Dr. Putnam violates the entire market value rule by relying
01:43:27	16	on the entire market value of the accused products without
01:43:29	17	showing that the patented feature is what creates the basis
01:43:33	18	for consumer demand.
01:43:35	19	Now, like I said, there are further apportionment
01:43:38	20	points in our motion, but now I'd like to turn to our
01:43:41	21	proposed related instruction.
01:43:43	22	I want to raise to Your Honor a case from the
01:43:47	23	Federal Circuit called Ericsson, 773 F.3d 1201. That's a
01:43:55	24	case authored by Judge O'Malley on behalf of a unanimous
01:44:00	25	panel, and it discusses the entire market value rule.

01:44:04

01:44:08

01:44:16

01:44:19

01:44:22

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01:44:40

01:44:43

01:44:47

01:44:51

01:44:52

01:44:57

01:44:59

01:45:03

01:45:07

01:45:08

01:45:08

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01:45:14

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I'd like to read a quote from that case. I have a 1 2 copy that I can hand up in just a moment. In Ericsson after discussing the entire market value rule, the Federal 3 Circuit states: When licenses -- I'm quoting here -- when licenses based on the value of a multi-component product 5 are admitted or even referenced in expert testimony, the 6 7 Court should give a cautionary instruction regarding the limited purposes for which such testimony is proffered if 8 the accused infringer requests the instruction.

The Court should also ensure that the instructions fully explain the need to apportion the ultimate royalty award to the incremental value of the patented feature from the overall product.

We ask that you give such an instruction here, and we've prepared a proposed instruction that I'm happy to hand up for your consideration along with a copy of the case with the highlighted -- highlight of the language that I just read.

THE COURT: Sure.

And have you -- on this issue of the requested instruction, have you conferred with opposing counsel?

MR. BURNAM: No. We don't think that this instruction was ripe until Dr. Putnam's testimony concluded and he relied on the entire market value in front of the jury as part of his damages calculation.

01:45:27	1	THE COURT: All right.
01:45:28	2	MR. BURNAM: But we're happy to hand it over to
01:45:30	3	them and confer with them about it, if you wish.
01:45:33	4	THE COURT: I do wish.
01:45:34	5	MR. BURNAM: Yes.
01:45:50	6	One last thing I'd like to emphasize about this
01:45:53	7	instruction is that we think it's timely now that
01:45:57	8	Dr. Putnam's testimony just occurred. The jury just heard
01:46:01	9	the entire market value being used.
01:46:05	10	THE COURT: Okay.
01:46:06	11	MR. BURNAM: And that's all I have.
01:46:09	12	THE COURT: Okay.
01:46:10	13	MR. BURNAM: I was just going to note that we
01:46:12	14	intend to submit the written motion. There will be a few
01:46:14	15	more details in cases, a few more flaws in Dr. Putnam's
01:46:20	16	testimony that we'd point out. We ask the Court grant our
01:46:23	17	JMOL motion.
01:46:24	18	THE COURT: So let me ask you, Mr. Burnam, and you
01:46:30	19	may you may not be familiar, but do you recall whether
01:46:31	20	this issue came up in the first trial?
01:46:33	21	MR. BURNAM: I was not involved in the first trial
01:46:35	22	so I don't have a recollection of that. I know that
01:46:38	23	Dr. Putnam similarly relied on the entire market value rule
01:46:42	24	in that trial. I became involved during the post-trial
01:46:45	25	briefing, and I believe in our JMOL motion there, we made a

01:46:47	1	similar argument.
01:46:49	2	THE COURT: Okay. And was this theory disclosed
01:46:52	3	in Dr. Putnam's expert report?
01:46:53	4	MR. BURNAM: The theory of the entire yes.
01:46:57	5	THE COURT: It was?
01:46:58	6	MR. BURNAM: He multiplied the full royalty base
01:47:01	7	by a rate.
01:47:01	8	THE COURT: Right. Okay. And so can you cite for
01:47:04	9	me and I certainly understand you can't give me page and
01:47:07	10	line number but can you cite for me generally the
01:47:10	11	testimony that you think compels this instruction?
01:47:12	12	MR. BURNAM: So I can cite a slide for you that I
01:47:16	13	took down as he was speaking. That was, I believe,
01:47:21	14	PDX-6-26, which had the full royalty base shown on the
01:47:27	15	slide.
01:47:27	16	For what it's worth, the jury also heard the full
01:47:31	17	royalty base read into the record by Pantech's counsel and
01:47:34	18	saw it on Pantech's opening slide.
01:47:37	19	So this would also offset some of that the
01:47:42	20	whatever impact that could have on skewing the damages
01:47:45	21	horizon for the jury.
01:47:46	22	THE COURT: Right. And so and this number was
01:47:48	23	not a number that was disclosed in his expert report?
01:47:51	24	MR. BURNAM: That's not what I'm arguing. The
01:47:54	25	concern underlying the entire market value rule is that

01:47:57	1	hearing such a number presented to the jury could skew the
01:48:01	2	damages horizon for the jury. And the instructions that
01:48:06	3	you're going to later give to the jury include an
01:48:08	4	instruction on apportionment.
01:48:09	5	But based on the Ericsson case, we think there's a
01:48:13	6	basis to also give a cautionary instruction now before
01:48:16	7	Defendants start their case to caution the jury to consider
01:48:19	8	only the incremental value of the patented features.
01:48:22	9	THE COURT: My concern is that you're not telling
01:48:25	10	me this number was not disclosed, correct?
01:48:29	11	MR. BURNAM: Correct.
01:48:29	12	THE COURT: But you're saying it just came up. So
01:48:33	13	if this is if this was a number that was previously
01:48:36	14	disclosed, it seems like this request for an instruction at
01:48:40	15	this point comes a little late.
01:48:43	16	MR. BURNAM: I understand Your Honor's concern.
01:48:45	17	It's not that we're surprised by this number. It's just
01:48:48	18	that after the theory has been presented to the jury, we
01:48:51	19	want the effect of the number on the jury to be addressed
01:48:56	20	by this kind of instruction, which is what the Federal
01:48:59	21	Circuit recommended in that case.
01:49:01	22	THE COURT: All right.
01:49:02	23	MR. BURNAM: That's all we're asking for.
01:49:03	24	THE COURT: All right. Let me hear from the
01:49:05	25	Plaintiff.

01:49:05	1	MS. KRAWICE: Talk about ambush today.
01:49:12	2	All right. So just on the JMOL issue, I'd first
01:49:16	3	like to say that obviously Pantech opposes the JMOL of no
01:49:21	4	damages.
01:49:21	5	As to incremental value and failure to apportion
01:49:24	6	forward citations based on family and I think entire market
01:49:28	7	value were all mentioned, we believe there's ample evidence
01:49:31	8	in the record to award Pantech damages in this retrial.
01:49:35	9	You've heard from the technical experts that
01:49:38	10	Pantech put forward, Dr. Cooklev and Mr. Mauro, about the
01:49:42	11	different features that are claimed in the patents and
01:49:45	12	those values that they contribute from a technical
01:49:47	13	standpoint.
01:49:48	14	And then you heard it from Dr. Putnam just now
01:49:54	15	about the economic value that these patents have,
01:49:56	16	performing a proper analysis of comparable licenses which
01:49:59	17	does take into account the apportionment of only the
01:50:02	18	patented features.
01:50:02	19	We believe JMOL at this time would be improper.
01:50:07	20	Would you like me to also address their stip
01:50:13	21	now oh, I'm sorry, not stip, instruction?
01:50:16	22	THE COURT: Please.
01:50:17	23	MS. KRAWICE: Okay. Your Honor, I say ambush
01:50:19	24	earlier because we have not heard of this proposed
01:50:22	25	instruction at all until just now I received what seems

to be a pretty official looking motion that someone must 01:50:25 1 2 have had time to write today. 01:50:28 This instruction from Ericsson we believe -- first 01:50:29 3 of all, these issues seem like -- and the instruction 01:50:32 here -- I'm looking at the first page of what I was just 01:50:37 handed by opposing counsel that says: The law requires 01:50:40 that the damages in this case be tailored to compensate 7 01:50:44 Pantech only for OnePlus's use of the features covered by 8 01:50:46 the Pantech patents at issue in this case. 01:50:50 Two issues I see here is that if they had problems 01:50:54 10 11 with Dr. Putnam's analysis of damages in this case, the 01:50:57 12 time to raise a Daubert is well behind us. 01:51:01 Second, his analysis did a comparable license 01:51:04 13 analysis which itself takes into account the apportionment 01:51:09 14 of only to the patented features. That was taken into 15 01:51:13 account in Dr. Putnam's analysis that he put forth. And we 01:51:17 16 don't believe this instruction is timely or proper at this 01:51:21 17 18 time. 01:51:24 THE COURT: All right. Anything else on that? 19 01:51:27 01:51:30 20 Anything else -- anything else on the JMOLs, for example? 21 MS. KRAWICE: We believe that there has been 01:51:33 22 evidence put forth from both technical and an economical 01:51:38 23 value that should afford Pantech damages in this case. 01:51:43 01:51:46 24 THE COURT: All right. Mr. Burnam, anything else? 25 MR. BURNAM: I'd just say that this JMOL motion 01:51:54

01:51:56	1	isn't ripe until now, so that's why we're presenting this
01:52:00	2	now. And then the timing for the instruction recommended
01:52:03	3	by the Federal Circuit case appears to be now, as well,
01:52:06	4	which is why we're raising it now.
01:52:11	5	And we disagree that Dr. Putnam's methodology
01:52:13	6	accounts for the incremental value of the patented
01:52:17	7	features, but I won't belabor that now. There'll be a
01:52:20	8	submission later that walks through the reasons why.
01:52:23	9	THE COURT: Okay. Fair enough. That's fine.
01:52:26	10	And and you can file that.
01:52:30	11	I, of course, am generally familiar with the
01:52:33	12	Ericsson-D-Link case. It's been a long time since I've
01:52:40	13	looked at it. Mr. Burnam has drawn my attention to a
01:52:46	14	citation on Page 17, at least in the copy that's been
01:52:49	15	handed to me about a cautionary instruction.
01:52:53	16	I really don't think there's much surprise here.
01:52:55	17	I think the parties could have raised this as an issue for
01:53:00	18	us. It certainly could have come up multiple times in the
01:53:03	19	cross-examination.
01:53:05	20	So I think the request, not to fuss at you, but I
01:53:10	21	think the request for a cautionary instruction mid-trial is
01:53:16	22	out of proportion to the testimony.
01:53:19	23	I'll certainly consider the appropriateness after
01:53:22	24	the parties have met and conferred about the instruction
01:53:25	25	for inclusion in the final instructions, but at least at

this point in terms of your request for a cautionary 1 01:53:29 instruction, I am going to deny that. 01:53:33 2 With respect to the JMOLs, is there anything else 01:53:35 3 you want to say about the JMOLs? 4 01:53:40 MR. BURNAM: No, we'll just follow up later with a 5 01:53:41 written submission. 01:53:44 6 7 THE COURT: All right. So you're going to --01:53:45 you're going to file a written motion for judgment as a 8 01:53:47 matter of law. 01:53:47 Just for purposes of the record, I do want to make 01:53:51 10 11 a couple comments about your oral motion. When considering 01:53:54 12 a motion for judgment as a matter of law, of course, I'm 01:54:02 required to review all of the evidence that's been 01:54:04 13 submitted. I have to draw all reasonable inferences in 01:54:07 14 15 favor of the non-movant. I have to give credence to 01:54:10 01:54:14 evidence that supports the movant that's not contradicted 16 or impeached, and I have to avoid making any kind of 01:54:17 17 credibility determinations or weighing the evidence as 18 01:54:22 that's a function for the jury. 19 01:54:27 20 A JMOL should be granted when there's no legally 01:54:28 sufficient evidentiary basis for a reasonable jury to find 21 01:54:33 22 on an issue on which that party has been fully heard. And 01:54:38 23 that normally happens in one of two types of situations, 01:54:45 01:54:50 24 where there's a complete absence of pleading or proof on an 25 issue that is material to a claim or defense, or where 01:54:54

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there are no controverted issues of fact on which
01:54:58
          1
             reasonable people could disagree.
01:55:04
          2
                      So if the evidence having been construed in the
01:55:05
          3
             light most favorable to the non-moving party allows only
          4
01:55:11
             one reasonable conclusion, then judgment as a matter of law
01:55:15
          6
             is proper.
01:55:18
          7
                      But if reasonable minds can differ on the
01:55:19
             importance or the effect of the evidence, a JMOL should be
          8
01:55:26
             denied and the case submitted to the jury.
01:55:31
                      So on the basis of the testimony I've heard and
01:55:34
         10
         11
             the arguments that you have presented, I'm going to carry
01:55:37
         12
             the motion for judgment as a matter of law on these issues
01:55:39
             and allow the case to proceed at this point.
01:55:44
         13
                      MR. BURNAM: Thank you, Your Honor.
01:55:46
         14
         15
                      THE COURT: All right. Anything else?
01:55:47
                      MS. KRAWICE: Yes, Your Honor. I believe this
01:55:51
         16
             morning we left with outstanding issues to be resolved
01:55:56
         17
             on --
         18
01:55:58
                      THE COURT: We did and there's just a couple, so
         19
01:55:59
01:56:01
         20
             can we handle those quickly?
         21
                      MS. KRAWICE: I hope so, Your Honor. And just to
01:56:05
         22
             preview, we are going to drop our objection to the
01:56:07
         23
             Exhibit PX-183, so we are just down to this discussion of
01:56:10
             Slide --
01:56:13
         24
         25
                      THE COURT: All right. Which one is it? Is it
01:56:13
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the last one? No, 183 is the last one.
01:56:15
          1
          2
                      MS. KRAWICE: Yes. The objection to exhibit, we
01:56:18
             are going to withdraw that objection now.
01:56:21
          3
                      THE COURT: So which is the last one to resolve?
          4
01:56:23
                      MS. KRAWICE: So we need to resolve the
          5
01:56:25
             outstanding one from this morning, which is to Slides 13
01:56:27
          6
             and 26 regarding that $90,000.
          7
01:56:29
                      THE COURT: Right. And I think what I had asked
          8
01:56:33
             the Defendants to do was to show where those royalty rates
          9
01:56:34
             in Dr. Lopez's report were disclosed.
01:56:38
         10
         11
                      MR. THOMPSON: That's right. Yes, Your Honor.
01:56:41
         12
                      If we can pull up the expert report of Dr. Lopez
01:56:42
             at 71, Mr. Carrillo.
01:56:47
         13
                      Okay. Here it is, Your Honor, if you'll look at
01:57:06
         14
         15
             Table 3 here, and he'll highlight where the royalty rate
01:57:09
             is, the
01:57:12
         16
         17
                      So just as a background, as best I can explain it,
01:57:16
         18
             this was his rate before apportionment. And, you know,
01:57:20
             during the Daubert process, you struck his apportionment
         19
01:57:23
01:57:27
         20
             but you didn't strike obviously the rate -- the beginning
             rate. So that's where that rate comes from.
         21
01:57:30
         22
                      THE COURT: Where is this exhibit from?
01:57:32
         23
                      MR. THOMPSON: This is on Page 17 -- Page 71 of
01:57:35
01:57:40
         24
            his expert report.
         25
01:57:41
                      THE COURT: Okay.
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MR. THOMPSON: And so I think you also asked for
01:57:41
         1
          2
             the math. So -- so what happened is, Your Honor, if you'll
01:57:43
             look -- we'll pull up Exhibit 1A to his report. If you're
01:57:47
          3
             satisfied with this, what you've seen here.
01:57:59
                      THE COURT: Well, I'd like to hear from her.
          5
01:58:01
            Really what I want to know is exactly -- let me hear from
01:58:04
          6
         7
             you.
01:58:06
                      This paragraph, this section was not stricken, was
         8
01:58:08
             it, Ms. Krawice?
01:58:11
         9
                      MS. KRAWICE: Sorry, I was handed a document that
01:58:13
         10
         11
             has lines through it that leads me to believe that it is
01:58:20
         12
             based on a stricken portion. And, actually, yes, it has.
01:58:23
01:58:27
         13
             Because in Paragraphs 172 to his report, Dr. Lopez's
             report, it says: At a minimum, this requires some
01:58:30
         14
         15
             apportionment of the value of the portfolio down to the
01:58:34
             patents-in-suit.
01:58:37
         16
         17
                      The apportionment was stricken from Dr. Lopez's
01:58:37
             report, and the issues with these specific numbers is
         18
01:58:42
         19
             they're not apportioned. So he is offering unapportioned
01:58:45
01:58:51
         20
             royalty rates, and his apportionment was struck.
         21
                      THE COURT: Okay.
01:59:00
                      MS. KRAWICE: Further, these are not apportioned
         22
01:59:01
         23
             for any particular patent as well.
01:59:03
01:59:07
         24
                      THE COURT: Okay. So I'm not sure I followed
             that. But let me hear from --
01:59:09
         25
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01:59:12	1	MS. KRAWICE: It's just that at best, this would
01:59:15	2	be SEP versus non-SEP. So it's even further not
01:59:19	3	apportioned.
01:59:20	4	THE COURT: Exactly what is the complaint here?
01:59:22	5	Because it sounds to me like you're saying he's offering a
01:59:26	6	higher royalty rate; is that not right?
01:59:27	7	MS. KRAWICE: To an extent. It's a little bit
01:59:29	8	more confusing than that.
01:59:31	9	THE COURT: Well, it's confusing enough as it is.
01:59:33	10	MS. KRAWICE: Your Honor, damages.
01:59:36	11	This rate is based on unapportioned numbers. The
01:59:43	12	basis of these two numbers that they've highlighted here
01:59:45	13	before you are unapportioned numbers.
01:59:48	14	THE COURT: Okay.
01:59:49	15	MS. KRAWICE: That's inappropriate. We should be
01:59:51	16	apportioning. However, Dr. Lopez's analysis of how to do
01:59:55	17	apportionment was struck. So now they have unapportioned
02:00:04	18	data that they cannot apportion because it was struck.
02:00:09	19	THE COURT: Okay.
02:00:10	20	MS. KRAWICE: Does that make sense?
02:00:13	21	THE COURT: Let me I'm hoping Mr. Thompson can
02:00:16	22	clear it up for us.
02:00:17	23	MR. THOMPSON: Well, Your Honor, this is the
02:00:19	24	unapportioned rate, that's correct. This is also the rate
02:00:21	25	that was presented in the first trial by Mr. Lopez, okay?

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And so my -- I guess I misunderstood the
          1
02:00:26
          2
             objection. I thought that the was fine, that it was
02:00:29
             the math that we were -- the numbers we were coming up with
02:00:32
          3
             that is where the complaint was, but this was not stricken.
02:00:35
                      THE COURT: I'm going to let you handle this on
          5
02:00:39
                      I think you can handle it on cross, and I think
02:00:42
          6
          7
             that's the place to do it.
02:00:44
                      MR. THOMPSON: Thank you, Your Honor.
          8
02:00:47
          9
                      THE COURT: Okay. Anything else?
02:00:48
                      We'll take a short break before we come back.
02:00:50
         10
         11
                      Anything else from either side?
02:00:53
         12
                      COURT SECURITY OFFICER: All rise.
02:00:56
02:00:59
         13
                      (Recess.)
02:06:17
         14
                      (Jury out.)
         15
                      COURT SECURITY OFFICER: All rise.
02:06:20
                      THE COURT: Mr. Goecke, if you would have the jury
02:14:58
         16
             brought down, please?
02:15:09
         17
         18
                      COURT SECURITY OFFICER: Please stand for the
02:15:11
         19
             jury.
02:16:07
02:16:07
         20
                      (Jury in.)
                      THE COURT: Please be seated.
         21
02:16:08
         22
                      All right. Ladies and gentlemen, welcome back.
02:16:33
         23
             Before we broke, you heard that the Plaintiffs had rested
02:16:39
02:16:44
         24
             on their case. And as you will recall, the Defendant will
             now have an opportunity to present any evidence it wishes
02:16:51
         25
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02:16:55	1	to. And then following that, if the Plaintiff has rebuttal
02:16:59	2	evidence and any time remaining, they may present any
02:17:07	3	rebuttal evidence that they have.
02:17:08	4	But at this time, subject to some legal arguments
02:17:12	5	that will be made later on, the Defendant may proceed to
02:17:16	6	call its first witness.
02:17:17	7	MR. THOMPSON: Thank you, Your Honor.
02:17:20	8	OnePlus calls Dr. Mario Lopez.
02:17:39	9	(Witness sworn.)
02:17:58	10	MR. THOMPSON: May I proceed?
02:17:59	11	THE COURT: You may.
02:18:01	12	MR. THOMPSON: Thank you.
02:18:01 02:18:01	13	MARIO LOPEZ, PH.D., DEFENDANT'S WITNESS, SWORN
02:18:01	14	DIRECT EXAMINATION
02:18:02	15	BY MR. THOMPSON:
02:18:02	16	Q. Dr. Lopez, would you introduce yourself to the jury?
02:18:05	17	A. Yes. My name is Mario Lopez. I am a Ph.D. economist
02:18:10	18	and a vice president at Charles River Associates. That's a
02:18:14	19	financial and economic consulting firm.
02:18:18	20	Q. And, Dr. Lopez, have you prepared some slides to assist
02:18:21	21	with your testimony today?
02:18:22	22	A. I have.
02:18:24	23	Q. And what is your role in this case?
02:18:26	24	A. So I was retained by counsel for OnePlus to assess
02:18:36	25	reasonable royalty damages and reasonable royalty rates for
	23	reasonable loyalty damages and reasonable loyalty rates for

02:18:38	1	the infringement of the four patents-in-suit in this
02:18:41	2	matter. I was also asked to review and respond to
02:18:47	3	Dr. Putnam's economic analysis in this matter.
	4	Q. And can you briefly tell us what your educational
02:18:51		
02:18:53	5	background is?
02:18:54	6	A. So I have a BA and a Ph.D. in economics from the
02:18:59	7	University of California at Berkeley. My specializations
02:19:05	8	at Berkeley and my Ph.D. studies were industrial
02:19:08	9	organization. That's business economics and something
02:19:11	10	called analysis of institutions.
02:19:14	11	Q. And could you describe for us your professional career?
02:19:17	12	A. So I've worked in economic consulting for about 18
02:19:22	13	years now, and I've done a variety of work. Some of that
02:19:25	14	work is related to antitrust issues. So if you think about
02:19:30	15	a monopoly case in which companies are price fixing, I've
02:19:34	16	analyzed those issues.
02:19:35	17	During those 18 years, I've spent a considerable
02:19:39	18	amount of my time working on patent valuations or the
02:19:44	19	valuations of patents for both SEPs and what we're
02:19:49	20	referring to here as NEPs, so non-standard essential
02:19:53	21	patents.
02:19:53	22	Q. And we've heard in this case that three of the four
02:19:56	23	patents are standard essential patents. Do you have any
02:19:59	24	experience with standard essential patents?
02:20:00	25	A. Yes, I do.

02:20:03	1	Q. Can you tell us?
02:20:04	2	A. Yes. So about one-third of my work as a consultant is
02:20:10	3	in licensing negotiations. So I assist companies during
02:20:14	4	the licensing negotiations, particularly for SEPs, which
02:20:19	5	tend to be worldwide licenses, and assist them in
02:20:23	6	developing FRAND royalty rates.
02:20:26	7	The other two-thirds of my work is in expert work
02:20:30	8	like this in court cases as expert testimony to help
02:20:36	9	educate juries and judges on these issues of FRAND
02:20:42	10	royalties.
02:20:43	11	I've been an expert witness at the in the U.K.,
02:20:46	12	in Germany, the New Delhi High Court, as well as the U.S.
02:20:53	13	International Trade Commission, and in jury trials, such as
02:20:57	14	this one.
02:20:57	15	Q. Can you explain what information you've reviewed in
02:21:00	16	doing your work in this case?
02:21:02	17	A. Yes. So I reviewed the financial information,
02:21:08	18	particularly those that are related to these licenses.
02:21:11	19	I've read the depositions of OnePlus and Pantech employees.
02:21:21	20	I've looked at the licenses in this matter, and I've also
02:21:25	21	conducted my own economic research and performed those
02:21:27	22	calculations that you'll see in this in this analysis
02:21:30	23	here.
02:21:32	24	MR. THOMPSON: Your Honor, at this time, we would
02:21:33	25	offer Dr. Lopez as an expert in economics and specifically

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patent royalty and damage analysis.
02:21:37
         1
                      THE COURT: Any objection?
          2
02:21:38
                      MR. TIDWELL: No objection, Your Honor.
02:21:39
          3
          4
                      THE COURT: Very well.
02:21:41
                 (By Mr. Thompson) What were you asked to do
          5
             Q.
02:21:46
             specifically in this case, Dr. Lopez?
02:21:49
          6
         7
             A. So I was asked to evaluate a reasonable royalty. And
02:21:50
             so at a high level a reasonable royalty, the idea is, is
          8
02:21:55
             that it's meant to compensate a patent holder for the use
02:21:57
             of their patented technology. And so Pantech deserves to
02:22:00
         10
         11
             be compensated. But the particular issue here or the
02:22:04
             particular patents here relate to complex smartphones.
         12
02:22:09
02:22:15
         13
                      So one of the issues that we're going to have to
             take into account is, how do we account for all of the
         14
02:22:17
         15
             complexity of these smartphones while still compensating
02:22:20
             Pantech for the use of its technologies?
         16
02:22:23
             Q. Now, three of the patents-in-suit, as we've said, are
02:22:28
         17
             these standard essential patents. What does that mean?
         18
02:22:32
             What is a standard essential patent?
         19
02:22:34
         20
             A. So as we've seen, the standard essential patents, if
02:22:38
             you pull up your phone right now and it will say 5G, there
         21
02:22:41
         22
             are thousands of patents that have been declared essential
02:22:45
         23
             to that standard.
02:22:50
         24
                      So part of the purpose of a standard is to bring
02:22:51
             all of those technologies together so that they
02:22:54
         25
```

02:22:56	1	interoperate seamlessly, so you don't know what
02:23:00	2	technologies are there but they're interoperating
02:23:03	3	seamlessly.
02:23:04	4	So that creates an issue in the context of
02:23:07	5	licensing negotiations. Once the standard is set, all of
02:23:13	6	those technologies get locked into the standard. And by
02:23:16	7	extension, the patents that are essential to the standard
02:23:20	8	are also locked in. And so that can affect licensing
02:23:25	9	negotiations.
02:23:27	10	So, in effect, if you have an SEP, one of the
02:23:29	11	thousands that are then determined to be essential, you
02:23:33	12	have to take a license. And so that can give bargaining
02:23:37	13	power to patent holders.
02:23:38	14	And so what the FRAND commitment does is helps
02:23:43	15	guarantee that those royalties remain reasonable and
02:23:47	16	affordable, particularly in the context of these complex
02:23:52	17	devices.
02:23:53	18	Q. Now, what does this word, FRAND, mean?
02:23:56	19	A. So we've seen it a couple of times, and I'll give my
02:24:02	20	interpretation, which is the economic interpretation that's
02:24:07	21	broken into two pieces.
02:24:08	22	So there is the FR prong, which is the fair and
02:24:11	23	reasonable, and that is what I said before, which is that
02:24:13	24	royalties need to be kept in proportion to the contribution
02:24:20	25	that patented technology brings, accounting for the

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complexity of the device.
          1
02:24:23
             Q. Okay. So if that's the FR part, what's the ND
02:24:25
          2
             component?
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          3
             A. So the ND component is non-discriminatory, and it means
02:24:28
             exactly as it sounds. It means that you cannot
          5
02:24:34
             discriminate against potential licensees by charging
02:24:38
          6
          7
             substantially different royalty rates, and there's a
02:24:43
             purpose for that in order to ensure that the playing field
          8
02:24:45
             is level.
02:24:49
                 Now, you were here in the -- you were here when
02:24:51
         10
             Dr. Putnam testified, correct?
02:24:54
         11
             A. Yes, I was.
         12
02:24:56
                 Okay. And did you hear his testimony regarding the --
02:24:57
         13
             specifically the size of certain licensees and volume
         14
02:25:02
         15
             discounts and that sort of thing?
02:25:05
             A. Yes, I did.
         16
02:25:06
                 Did you -- do you agree with the opinions he gave?
02:25:07
         17
                 So, no. So -- and this is an important factor.
         18
             Α.
02:25:09
         19
             we're going to see here is that there are two companies
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         20
             which make up the majority of the market. There's no
02:25:18
         21
             dispute about that.
02:25:20
         22
02:25:22
                       They
                                                                         the
         23
             SEPs, except for the '247 patent, and the NEPs.
                                                                     So they
02:25:26
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         25
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1	And so the entire purpose is to to keep the
2	playing field level is for other companies to be able to
3	not be discriminated against. So Pantech can't
4	discriminate discriminate based on the size of the
5	company that would an example of this might be Walmart.
6	If you're a small grocer, you're going to pay more
7	for bread, you might pay 10 percent more or 20 percent
8	more, but we wouldn't expect them to pay 10 times more or
9	200 times more. That would be clearly discriminatory.
10	Q. Now, what happens if someone transfers their patents,
11	does this FRAND obligation go with the patents?
12	A. Yes, I think that that's agreed upon. And that's an
13	important factor here. It wouldn't make any sense
14	otherwise. Otherwise, you would have these patents, and
15	then you could transfer them, and then that obligation
16	would go away, and then you would lose the whole meaning of
17	FRAND.
18	So you could just transfer the patents, and then
19	the FRAND obligation wouldn't wouldn't hold anymore. So
20	even even when the patents are transferred, that
21	obligation goes with it.
22	Q. Now, on this slide, you've got OnePlus's smartphones
23	and thousands of features. Can you explain what you're
24	trying to illustrate here?
25	A. So if you're a smartphone company, it's important that
	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

you think about the issue of royalty stacking, and that is 1 02:27:05 the total royalties that you may have to eventually pay on 02:27:10 your phone for all the technologies that are included. 02:27:15 3 So what is royalty stacking? It's just the 4 02:27:20 potential of the accumulation of royalties as patent 5 02:27:22 holders come and demand royalties for you. And so even a 02:27:27 6 7 small royalty, if you pay -- pay an excessive amount, if it 02:27:30 8 accumulates, it can be unprofitable to produce your 02:27:36 products. 02:27:41 Q. And so do you know about how many patent families there 02:27:42 10 are for 4G and 5G technology? 02:27:46 11 A. So even before we get to 4G and 5G, we have to consider 12 02:27:50 02:27:55 13 all the other complexities of the -- of the smartphone. And so when we're thinking about what it takes to bring a 14 02:28:01 15 smartphone to market, we have OnePlus's contributions. 02:28:04 invests R&D. It has marketing. It has brand value. And 16 02:28:08 it has to incur its marketing costs. 02:28:13 17 18 There's -- when you look at a smartphone, there's 02:28:16 19 hardware and software. You have processors, touchscreen 02:28:19 20 displays, very, very sophisticated cameras that 20 years 02:28:25 21 ago you were carrying around as a separate camera. And 02:28:29 22 then you have the operating system, like Android, and that 02:28:32 23 enables a lot of the apps that we're seeing, like TikTok 02:28:34 24 and Facebook. You have GPS, accelerometers, and other 02:28:37 hardware in those devices. 02:28:43 25

02:28:45	1	And then we get to the standards. Your phone has
02:28:48	2	WiFi on it. None of you would probably buy a phone if it
02:28:52	3	didn't have WiFi in it. And these patents do not relate to
02:28:55	4	WiFi.
02:28:56	5	There's Bluetooth. There's NFC, if you use your
02:29:00	6	phone for payments. There are these standards, the HEVC
02:29:05	7	and AVC standards, which take video files and compress them
02:29:08	8	down so that they can be sent over your cellular
02:29:11	9	cellular network. And there are there are thousands of
02:29:13	10	patents worldwide on those standards.
02:29:16	11	And so we're just talking about one slice of the
02:29:20	12	features of the phone that is the 4G and 5G, which then
02:29:24	13	we're going to be talking specifically about the patented
02:29:27	14	technologies are only a component of those.
02:29:29	15	Q. And do you know how many patent families exist for the
02:29:35	16	5G and 4G technology?
02:29:36	17	A. So for the 4G standard, there have been approximately
02:29:41	18	20,000 patents that have been declared essential to that
02:29:43	19	standard.
02:29:43	20	For the 5G standard, which is even more complex,
02:29:49	21	30,000 patents have been declared essential to that
02:29:51	22	standard.
02:29:53	23	Q. Okay. Okay. Can you describe for us your approach to
02:29:59	24	your calculation of a reasonable royalty?
02:30:02	25	A. Yes. So there's a variety of ways in which you can

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calculate reasonable royalties or FRAND royalties, and one
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          2
             of them is a comparable license approach.
02:30:11
                      Dr. Putnam and I agree on this approach, and we --
02:30:13
          3
             we agree on the analogy when we're buying a home, we're
02:30:16
             looking at comparable homes in the neighborhood of
          5
02:30:19
          6
             comparable features, looking at two bedroom homes with two
02:30:26
             baths.
          7
02:30:36
                      There is -- what we're looking for here is
          8
02:30:37
          9
             specifically what other companies are paying to use
02:30:39
             Pantech's patented technologies. And one of the most
02:30:42
         10
         11
             important features here is that the comparable must
02:30:47
         12
02:30:51
             represent the actual market price.
                      So Dr. Putnam frequently talked about real-world
02:30:54
         13
             evidence. And so while we agree at this very high level,
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         14
         15
             I'm going to talk about some very specific missing pieces
02:31:02
             of Dr. Putnam's analysis that fundamentally alter some of
02:31:05
         16
             his calculations and some of the conclusions that we should
02:31:10
         17
             be drawing
         18
02:31:13
         19
             Q. Okay.
02:31:16
02:31:16
         20
                      MR. THOMPSON: Your Honor, at this moment, I think
             we need to go ahead and seal the courtroom for a little
         21
02:31:18
         22
             bit.
02:31:20
         23
                      THE COURT: All right. The courtroom will be
02:31:21
02:31:22
         24
             sealed at this time.
         25
                      (Courtroom sealed.)
02:31:23
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02:31:23	1	(This portion of the transcript is Sealed and
02:31:23	2	filed under separate cover as Sealed Portion
02:41:16	3	No. 6.)
02:41:16	4	(Courtroom unsealed.)
02:41:22	5	Q. (By Mr. Thompson) Okay. Looking at your next slide
02:41:45	6	here, now, what does Dr. Putnam rely on?
02:41:47	7	A. So Dr. Putnam ignores the Apple and Samsung agreement.
02:41:53	8	He places those he places those aside despite the
02:41:59	9	non-discriminatory obligation, and he only looks at four
02:42:02	10	licenses in the end that he deems as comparable.
02:42:05	11	And what we can see here, that they are very minor
02:42:08	12	players in the market. Coolpad and GNJ don't have any
02:42:12	13	sales in the market, and Sony and BLU are very minor
02:42:18	14	players.
02:42:20	15	Q. Okay. Can you tell us what did you analyze the BLU
02:42:22	16	license?
02:42:23	17	A. Yes, I did.
02:42:23	18	Q. Can you walk us through your analysis?
02:42:26	19	A. So the first factor here is that the BLU license is the
02:42:31	20	settlement of litigation. So there was a litigation that
02:42:34	21	Pantech had sued BLU, and they ended up settling that
02:42:40	22	litigation through this through this license.
02:42:42	23	If we look at this license, it is one license with
02:42:47	24	a very tiny market share, and that does not equate. So
02:42:53	25	this one license cannot equate to a market rate given

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            given their size.
02:42:56
            Q. And does -- in your calculation, does BLU end up paying
02:42:57
            Dr. Putnam's
02:43:01
            A. So we have to look at here the royalty rate on past
02:43:03
            sales. And so this gives you a magnitude -- a sense of the
02:43:08
            magnitude when we're limiting to past sales for BLU, it's
02:43:13
         6
              . And, again, that's a portfolio rate, and it
         7
02:43:19
            covers sales outside of the U.S. And so I've gone through
02:43:22
         8
             and I've performed a calculation, which is what is the
02:43:29
             effective royalty rate that BLU paid? What was the value
02:43:32
        10
        11
             of that compared to its sales? And that effective
02:43:36
             royalty rate calculation comes out to be percent.
        12
02:43:42
02:43:46
        13
                      So we know that they got a discount on part of
            their sales. So they're not paying
02:43:51
        14
        15
02:43:55
        16
            Q. Okay.
02:43:56
        17
                      MR. THOMPSON: Let's go to the next one.
02:43:57
                And just to -- I'm going to add one more thing, and
        18
02:44:00
            that is -- so just to make this clear, they paid the
        19
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        20
                                       on ongoing sales, but received
        21
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        22
                      This would be the equivalent of if you have a
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        23
            basket of oranges at 10 cents and you have another basket
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02:44:23
        24
             of oranges at 50 cents, but the key is you have to buy
             those baskets together, then you're going to consider the
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        25
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overall average of those prices.
         1
02:44:31
          2
                      Dr. Putnam is only considering the high price
02:44:33
            basket. He's only considering the higher rate for the
02:44:36
          3
             future sales.
02:44:41
             Q. (By Mr. Thompson) Okay. On this, did you look at the
02:44:43
             Coolpad license and do an analysis of it?
02:44:45
          7
            A. Yes.
02:44:48
         8
             Q. Can you explain that to us?
02:44:49
            A. Yes. So it's a settlement of litigation. Again, we
02:44:50
             can see that the actual payment on past sales is
02:44:54
        10
                              . And, again, that is a portfolio
             Just less than
02:45:02
        11
        12
             rate. When we're looking at past sales for a portfolio,
02:45:06
             it's very limited in terms of -- in terms of their
02:45:09
        13
02:45:12
        14
            royalties.
        15
                      But an important factor here is that Coolpad has
02:45:13
             exited the market, and it was known at the time they
        16
02:45:17
             entered the license that they were exiting the market. So
02:45:19
        17
             they have never written a check for any sales at the rate
        18
02:45:23
        19
                             . It's a rate that exists on a paper, but
02:45:29
        20
             it is not a rate Coolpad has ever paid. So it is just a
02:45:37
         21
             paper rate.
02:45:41
         22
                      MR. THOMPSON: Your Honor, I'm told that we should
02:45:42
        23
             seal the courtroom for this, too, so let's do that.
02:45:43
         24
                      THE COURT: All right.
02:45:46
        25
                      MR. THOMPSON: If you're okay with it.
02:45:46
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02:45:48	1	THE COURT: The courtroom will need to be sealed
02:45:50	2	at this time.
02:45:51	3	(Courtroom sealed.)
02:45:51	4	(This portion of the transcript is Sealed and
02:45:51	5	filed under separate cover as Sealed Portion
03:28:00	6	No. 7.)
03:28:00	7	(Courtroom unsealed.)
03:28:01	8	THE COURT: Ladies and gentlemen of the jury,
03:28:02	9	you've heard that the Defendant have now rested. Do the
03:28:06	10	Plaintiffs have any rebuttal witnesses?
03:28:08	11	MR. FUSSELL: No, Your Honor, the Plaintiff rests.
03:28:11	12	THE COURT: All right. Does the Plaintiff rest on
03:28:12	13	its entire case?
03:28:13	14	MR. FUSSELL: Yes, Your Honor.
03:28:14	15	THE COURT: And does the Defendant rest on its
03:28:16	16	entire case?
03:28:17	17	MR. THOMPSON: Yes, Your Honor.
03:28:17	18	THE COURT: All right. Very well.
03:28:20	19	Ladies and gentlemen of the jury, you recall from
03:28:21	20	yesterday morning that what remains to be done in in
03:28:27	21	this trial is the instructions that I will give you about
03:28:31	22	the law that you must follow in your deliberations, and
03:28:37	23	then following that, the parties' closing arguments about
03:28:42	24	what they believe the appropriate verdict is.
03:28:44	25	All of the testimony has now been presented to

you. We have some legal arguments that we will need to 1 03:28:48 work through this afternoon after you have left, and then 03:28:55 2 we'll do that again in the morning. 03:29:00 3 But I do think, given the hour and what remains to 4 03:29:02 be done, that we can handle everything and be ready to go 5 03:29:06 here in the courtroom with you at 9:00 o'clock in the 03:29:10 6 7 morning, beginning with the closing -- or the final 03:29:13 instructions and then with the parties' closing arguments. 8 03:29:17 So I'll ask you to be here just a little bit 03:29:21 before 9:00 o'clock so that you can get up to the jury room 03:29:24 10 11 and get settled and situated. And then we will look 03:29:27 forward to having you here in the courtroom as close to 12 03:29:31 03:29:34 13 9:00 a.m. as possible for the final instructions and 14 closing arguments. 03:29:40 15 So as a reminder, don't talk to anyone about the 03:29:41 case. Don't allow anyone to talk about the case in your 16 03:29:46 presence. Don't do any independent research or 03:29:49 17 investigation into anything associated with the case. 18 03:29:54 And, finally, don't post anything about your 19 03:29:57 03:30:01 20 involvement as a juror on any -- any social media website 21 or app. 03:30:04 22 Hope you all have a pleasant evening, and we'll 03:30:04 23 see you back in the morning at 9:00 a.m. 03:30:09 03:30:13 24 COURT SECURITY OFFICER: Please stand for the 03:30:16 25 jury.

03:30:16	1	(Jury out.)
03:30:20	2	THE COURT: Please be seated.
03:30:53	3	Okay. I just have a couple of brief comments
03:31:02	4	about the instructions. And anything else anybody wishes
03:31:07	5	to raise, I'll be glad to hear.
03:31:10	6	Is there anything we need to talk about before we
03:31:12	7	talk about instructions?
03:31:13	8	MR. AIRAN: Your Honor, I'm not sure if my
03:31:16	9	colleague is going to come up again, Justin, and renew our
03:31:21	10	Rule 50 motion.
03:31:22	11	THE COURT: Fair enough.
03:31:33	12	MR. BURNAM: Your Honor, may it please the Court.
03:31:37	13	We just renew the same JMOL motion that I
03:31:41	14	discussed earlier. We'll be shortly filing it on the
03:31:45	15	docket.
03:31:46	16	The JMOL is for no damages because Pantech has not
03:31:49	17	carried its burden, at least because Dr. Putnam's
03:31:53	18	methodology presented to the jury is fundamentally flawed.
03:31:56	19	THE COURT: All right. Very good.
03:31:58	20	Ms. Krawice?
03:32:02	21	MR. BURNAM: There's one particular issue that I
03:32:04	22	wanted to raise is, in particular, we think there should be
03:32:08	23	JMOL of no damages for the '654 non-essential patent
03:32:12	24	because of lack of evidence presented to the jury tying
03:32:17	25	Dr. Putnam's royalty rate for that non-essential patent to

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1
             the value of that non-essential patent.
03:32:20
                      THE COURT: Ms. Krawice, what evidence was there
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          2
             related to the '654, Ms. Krawice?
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          3
          4
                      MS. KRAWICE: Your Honor, there was first the --
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             from the technological standpoint, there was the evidence
          5
03:32:36
             provided by Mr. Mauro, and then Dr. Putnam explained how he
03:32:39
          6
          7
             heard that it was commercially essential so that he
03:32:43
             afforded it a similar rate to one of the SEP patents when
          8
03:32:48
             he was determining a rate.
03:32:52
                      There was -- further then, Dr. Putnam provided
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         10
             that rate before the jury based on the sales basis that
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         12
             were stipulated to, and those numbers were presented to the
03:33:04
03:33:07
         13
             jury.
                      MR. BURNAM: Your Honor, there's a few points on
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         15
             this I'd like to make.
03:33:14
                      So, first of all, in direct, Dr. Putnam didn't at
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03:33:15
             all talk about any analysis he did for what the value of
03:33:20
         17
         18
             the '654 patent should be. On cross, he did equate it with
03:33:26
             the value of the 24 --
         19
03:33:29
         20
                      THE COURT: Did it really even come up on direct?
03:33:31
         21
                      MR. BURNAM: It didn't come up on direct at all.
03:33:34
         22
                      THE COURT: At all.
03:33:37
         23
                      MR. BURNAM: No. That's -- I think -- I wasn't
03:33:37
         24
             there -- but I assume that's what the sidebar was about.
03:33:38
03:33:40
         25
             It didn't come up on direct.
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03:33:42	1	And on cross, Mr. Filbin asked if he had given any
03:33:47	2	discussion analysis about it, something like that, and his
03:33:50	3	answer was not responsive to the yes or no question.
03:33:55	4	THE COURT: Yeah, Ms. Krawice, that's kind of how
03:33:57	5	it happened, isn't it?
03:33:59	6	MS. KRAWICE: Your Honor, I was here for the
03:34:00	7	direct examination, and as the person who also was putting
03:34:04	8	forth Mr. Mauro's testimony, I was carefully listening to
03:34:08	9	mentions of the non-SEP during the direct examination.
03:34:12	10	There were references to the the calculation
03:34:17	11	being performed between the non-SEP and the essential
03:34:22	12	patent, and if you put evidence all together, you had
03:34:26	13	Mr. Mauro who testified how this was a commercially
03:34:29	14	essential patent. You had Dr. Putnam talking about
03:34:34	15	standard essential patents and essentiality in that regard,
03:34:37	16	as well as the fact that he was here for Mauro's testimony
03:34:40	17	and
03:34:41	18	THE COURT: Right. But he it is accurate that
03:34:43	19	Dr. Putnam didn't specifically address the '654, is it not?
03:34:47	20	MS. KRAWICE: He did, Your Honor.
03:34:48	21	THE COURT: Oh, he did, okay.
03:34:50	22	MS. KRAWICE: Yes. He presented his numbers to
03:34:52	23	the jury. It's just unfortunate that it was mixed in with
03:34:55	24	a conversation with the SEPs as well.
03:34:57	25	THE COURT: Oh, okay.

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MR. BURNAM: So, Your Honor, to clarify, I was here for the direct, just not the sidebar. But during the direct, it may have been on a slide, but I don't remember any actual analysis comparing the '247 and the '654, which is the opinion he gave.

And, also, Dr. Mauro and Dr. Cooklev both testified that neither of them did that analysis and indeed neither of them is qualified to do a comparison of a patent that they were not assigned to analyze with the patent that they were assigned to analyze.

Furthermore, even if the 2 -- the '654 patent is commercially essential, the VirnetX case from the Federal Circuit, I don't have the citation with me right now, but says that it does not matter if a patent is important, valuable, or, quote, "even essential," that does not -- and now I'm not quoting -- but that does not satisfy the obligation of apportionment. That will be in the motion we file later.

So regardless of whether it's commercially essential, that wouldn't even be enough. But there's no evidence that any of the experts is qualified to do the comparison.

MS. KRAWICE: Your Honor, further, Dr. Putnam extensively discussed this on redirect where I believe the door was opened for him to opine on the '654 patent.

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There was a lengthier discussion in the redirect of Dr. Putnam regarding the '654 methodology in particular, and that was specifically tied to the fact that he did a comparison between the essentiality in regards to commercially essential versus an SEP essentiality, and that's how he reached his apportioned number of a reasonable royalty rate for those patents.

They are the same because he opined that the essentiality in a commercial standpoint as explained to him by Mr. Mauro, who they've had conversations with before of reaching his opinions in this case, was then tied to the largest value he assigned it for one of the SEPs.

THE COURT: Okay. All right. So Mr. Burnam, what I'm going to do on this is the same thing I've done on the other issues, I'm going to carry it. You know, the transcript will reveal, you know, what came out. And I obviously know Mr. Filbin brought it up on cross. I'm not sure that it was raised before that, and I don't know that the -- the extent to which it came up in redirect.

But, obviously, depending on, you know, how the verdict turns out, the parties can file renewed motions for judgment as a matter of law under 50(b), and at that point, we'll have, you know, the final transcript and a more careful scrutiny of that and the full record will be -- will be possible.

03:37:52	1	MR. BURNAM: Understood. Thank you, Your Honor.
03:37:53	2	THE COURT: All right. All right. Instructions.
03:37:57	3	It looked like there was just really one dispute, as I
03:38:01	4	understood it, and that had to do with the date the damages
03:38:05	5	period begins. And I'm wondering if based on the
03:38:08	6	stipulations the parties made and that were read into the
03:38:13	7	record earlier, that issue has been totally resolved?
03:38:16	8	MR. FUSSELL: Yes, Your Honor. From our
03:38:17	9	standpoint, I believe it has been resolved now.
03:38:19	10	MR. SANNER: James Sanner for OnePlus, Your Honor.
03:38:23	11	Just to be clear, what is the resolution that should come
03:38:25	12	out or stay in?
03:38:30	13	MR. FUSSELL: Sorry. Obviously, we have not had
03:38:33	14	that had not had it resolved. I thought since we had
03:38:36	15	the notice language from the stipulation, it would stay in.
03:38:40	16	MR. SANNER: So our position sorry, I don't
03:38:43	17	want to
03:38:43	18	THE COURT: Let me suggest this. You all see if
03:38:45	19	you can meet and confer. There was a stipulation that was
03:38:49	20	agreed to about a part the parties here on an issue
03:38:54	21	that an enormous amount of time was spent by both sides
03:38:58	22	arguing about. It's a very, very straightforward issue. I
03:39:01	23	truly don't know why it took the parties such effort to get
03:39:05	24	to a resolution on that.
03:39:07	25	So I'm going to give you 15 minutes to see if you

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can't work this out, too. I think it's unlikely you can't.
03:39:10
          1
                      So let's take about a 15-minute break and see if
          2
03:39:16
             you all can work something out.
03:39:19
          3
                      MR. SANNER: Appreciate it, Your Honor.
03:39:22
          4
          5
                      COURT SECURITY OFFICER: All rise.
03:39:24
          6
                      (Recess.)
03:39:25
          7
                      COURT SECURITY OFFICER: All rise.
03:39:25
                      THE COURT: Please be seated.
          8
03:46:52
          9
                      All right. Did you all have an opportunity to
03:46:54
             visit?
03:46:56
         10
         11
                      MR. SANNER: Yes, Your Honor. We have reached an
03:46:57
             agreement on the instruction.
03:46:58
         12
                      THE COURT: Okay. Good.
03:46:59
         13
                      MR. SANNER: I can read it into the record for
03:47:00
         14
         15
            you.
03:47:02
                      THE COURT: That'll be fine.
03:47:02
         16
         17
                      MR. SANNER: All right. The parties have
03:47:03
         18
             stipulated as to notice and amounts of licensable sales for
03:47:05
             each patent which you heard read into the record as
         19
03:47:08
03:47:12
         20
             stipulations.
         21
                      THE COURT: All right. Is that good for the
03:47:14
             Plaintiff?
         22
03:47:16
         23
                      MR. FUSSELL: Yes, Your Honor.
03:47:16
03:47:17
         24
                      THE COURT: Good. Okay.
         25
03:47:18
                      MR. SANNER: Thank you.
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03:47:19	1	THE COURT: As far as I know, that resolves all
03:47:21	2	objections regarding instructions, correct?
03:47:25	3	MR. FUSSELL: Yes, Your Honor, from our side, that
03:47:26	4	resolves everything.
03:47:27	5	MR. AIRAN: Yes, correct, Your Honor.
03:47:30	6	THE COURT: It does?
03:47:31	7	All right. What else?
03:47:33	8	MR. CULBERTSON: Your Honor, Mr. Tidwell promised
03:47:40	9	that we would preview for the Court
03:47:44	10	THE COURT: We're all on pins and needles.
03:47:47	11	MR. CULBERTSON: What we're proposing in terms of
03:47:49	12	adding back the discounts that were testified to, and we've
03:47:52	13	shared it with the other side. They're digesting it and
03:47:55	14	are going to get back to us. I think we agree on the math.
03:47:58	15	I think we have a disagreement about whether it is an
03:48:01	16	appropriate thing to include.
03:48:02	17	THE COURT: Sure.
03:48:03	18	MR. CULBERTSON: What I thought I would do is just
03:48:05	19	leave the Court a copy and
03:48:07	20	THE COURT: Right. Why don't you just tell me
03:48:09	21	what it is, and then leave me a copy?
03:48:12	22	MR. CULBERTSON: Sure. For the SEPs, the
03:48:14	23	multiplier becomes 1.42. And for the non-essential patent,
03:48:22	24	the multiplier becomes 1.67. And those calculations are
03:48:28	25	made based on the factual testimony that Mr. Jung provided

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from the stand.
03:48:34
         1
          2
                      THE COURT: Okay.
03:48:35
                      MR. CULBERTSON: And it's the discounts that they
03:48:37
          3
             made -- you know, it's how they calculated their standard
03:48:39
          4
             rate, the discount that they made to -- excuse me, they
          5
03:48:42
             calculated their true SEP rate. They applied a discount
03:48:45
          6
         7
             when they would offer it to licensees. They also offered a
03:48:49
             discount on the NEPs. And we're just adding that back in
         8
03:48:52
             due to the lack of uncertainty at this point.
         9
03:48:56
                      THE COURT: And is what you're going to provide
03:48:59
         10
             me, does it provide the math that you're --
03:49:01
         11
         12
                      MR. CULBERTSON: It provides the math.
03:49:04
03:49:04
         13
                      THE COURT: The math is there, as well?
                      MR. CULBERTSON: Yes, Your Honor.
03:49:06
         14
         15
                      THE COURT: And the -- you all had indicated that
03:49:07
             was a theory that was disclosed in response to an
         16
03:49:09
             interrogatory? I never actually saw the interrogatory.
03:49:15
         17
         18
                      MR. CULBERTSON: I'm happy to provide the Court
03:49:17
             with all the materials. There's an interrogatory response,
         19
03:49:18
03:49:21
         20
             there's Mr. Putnam's report, there's Mr. Jung's deposition,
             there was the testimony that came in yesterday, there was
         21
03:49:25
         22
             the slide that showed the discounts. So this is -- this is
03:49:28
         23
             just putting -- this is just doing the math to put it back
03:49:31
03:49:35
         24
             in.
         25
03:49:36
                      THE COURT:
                                   Right. Okay. Thank you.
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03:49:37	1	MR. CULBERTSON: Thank you, Your Honor.
03:49:41	2	And I'm going to hand this up.
03:49:42	3	THE COURT: Yes, please.
03:49:44	4	MR. CULBERTSON: And we can email it as well.
03:49:48	5	THE COURT: Have you had an opportunity thank
03:49:51	6	you.
03:49:51	7	Have you had an opportunity to review it yet?
03:49:53	8	MR. AIRAN: Not yet, Your Honor.
03:49:55	9	THE COURT: All right. Well, I'll be glad to hear
03:49:56	10	what you say, but
03:49:57	11	MR. AIRAN: We're just seeing it now, so we're
03:49:59	12	taking it under advisement. What I would say, though, is
03:50:02	13	that fundamentally we would disagree with this approach.
03:50:06	14	It's not a disclosed damages theory. When you look at what
03:50:07	15	was described in the interrogatory, it was an explanation
03:50:09	16	for how they achieve the standard rate.
03:50:12	17	The standard rate is what applies here, not some
03:50:14	18	kicker. And for the same reason you kicked out the
03:50:17	19	multiplier for Dr. Putnam, I would the same type of
03:50:20	20	logic applies here. There's no basis for this kicker that
03:50:24	21	they're putting in because there's an adjudication of
03:50:27	22	infringement and and validity now.
03:50:29	23	This was under Georgia-Pacific, you're supposed
03:50:32	24	to assume that the patents are valid and infringed. And
03:50:35	25	the notion that way back when in 2018 or 2019, whenever

03:50:44 03:50:47	2	
03:50:47		let's go to people that we're going to license and pretend
	3	there's this big discount, there's no discount there
03:50:51	4	whatsoever.
03:50:52	5	As we explained in connection with generating that
03:50:54	6	rate, it's not a solid rate. There's no basis for that
03:50:56	7	rate economically. And so saying there's a discount in
03:50:59	8	their program rate, it's a fantasy. It's a fiction. It's
03:51:05	9	not reality. And so then for them to come in now
03:51:05	10	THE COURT: I mean, is that really is that an
03:51:08	11	accurate description?
03:51:09	12	MR. AIRAN: It is, Your Honor, because, again,
03:51:11	13	when you look at you look at their interrogatory rate,
03:51:16	14	for example, you look at the Plaintiffs' Exhibit 37, it's
03:51:19	15	this whole problem with Unwired Planet, they're using U.K.
03:51:23	16	data, U.K. patents, outdated stack, outdated patents that
03:51:27	17	are owned for the numerator. It's this this concoction
03:51:32	18	of the royalty rate that's at issue here.
03:51:34	19	No expert has signed on to that. So it's out of
03:51:37	20	this royalty rate presentation that they give to potential
03:51:40	21	licensees that they say, look, you're getting a deal. We
03:51:43	22	could be charging you this higher rate, but you're actually
03:51:46	23	getting this deal.
03:51:47	24	And what the evidence was for Mr. Jung is that
03:51:50	25	they have never charged anybody more than the 0.5. That's

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the FRAND rate that they said that they've put out there
03:51:54
         1
             for every single licensee, even if they sue them.
03:51:56
          2
                      So this idea that now they can -- now that there's
03:52:00
          3
            been a trial and that there's been an adjudication, they
03:52:02
             can kick that up, that's just not -- not correct.
03:52:05
          6
                      THE COURT: Well, I mean, most of the arguments --
03:52:07
             I mean, I -- if this wasn't disclosed or there's something
         7
03:52:10
             that's been hidden and, you know, they're springing this on
         8
03:52:13
             you during the trial, that's -- that's a very compelling
03:52:16
             argument. They say that's not the case. We'll see what
03:52:22
        10
             they provide me.
03:52:25
        11
        12
                      But I think what you've told me so far, and,
03:52:27
             again, you haven't had an opportunity to review it, and you
03:52:30
        13
             may have additional objections that you've not made at this
03:52:32
        14
             point, but based on what you've told me so far, Mr. Airan,
        15
03:52:36
             I think that all of those are issues that should be
        16
03:52:40
             addressed in closing.
03:52:43
        17
        18
                      MR. AIRAN: Sure. And, to be clear, that is --
03:52:44
             their theory of how they came up with the 0.5 standard
        19
03:52:47
        20
             essential rate is in the interrogatory. We're not
03:52:54
             disputing that part of it.
         21
03:52:55
         22
                      THE COURT: Okay. Fair enough. All right. Good.
03:52:56
         23
                      Exhibits, does anybody need to read in exhibits?
03:52:59
03:53:03
         24
                      Ms. Miller?
03:53:05
         25
                      MS. MILLER: Yes, Your Honor. I do.
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03:53:07	1	For October 15th, the admitted exhibits as agreed
03:53:12	2	by the parties were PX-1, 4, 5, 40 through 43, DTX-5, and
03:53:23	3	DTX-7. And the parties are also in the process of
03:53:26	4	discussing proposed redactions to PX-37 to find an agreed
03:53:33	5	upon set, and once we get there, we will move that exhibit
03:53:36	6	in evidence, but we're not trying to do so at this time.
03:53:39	7	THE COURT: Okay. And that was agreed? I don't
03:53:44	8	know, who's speaking for
03:53:48	9	MR. SANNER: Yes, Your Honor.
03:53:49	10	THE COURT: Okay. Good.
03:53:50	11	Okay. What else? It's just whack-a-mole this
03:53:58	12	afternoon.
03:53:59	13	MS. KRAWICE: I'm having a great day, Your Honor.
03:54:01	14	THE COURT: You're doing a great job.
03:54:02	15	MS. KRAWICE: Thank you.
03:54:03	16	I just wanted to raise just a point of, I don't
03:54:06	17	know, procedure, I guess I'll call it. I just noticed that
03:54:10	18	OnePlus has filed a sealed motion for judgment as a matter
03:54:15	19	of law on the docket. I haven't seen it yet. We haven't
03:54:18	20	been served just quite yet, but I just wanted Your Honor to
03:54:23	21	bless the fact that we believe that the parties similar to
03:54:25	22	last time should agree to a post-trial briefing schedule
03:54:28	23	that should then be followed. I didn't have a chance to
03:54:31	24	raise this before they filed this.
03:54:33	25	THE COURT: Yeah, sure. I mean, I'm going to ask

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the parties to agree on a post-trial briefing schedule just
          1
03:54:34
             like last time.
03:54:38
          2
                      To the extent you want to file something on the
03:54:39
          3
             docket in response to that now, you're more than welcome to
03:54:41
          4
             do that, and I'm certainly not going to give you legal
          5
03:54:44
             advice about whether you have to or not. But definitely
03:54:49
          6
             if -- depending on how the verdict comes down, the parties
          7
03:54:54
          8
             will, you know, have an opportunity to file post-trial
03:54:57
             briefs, and I'll ask you to agree on a schedule that --
03:55:01
             that accomplishes that.
03:55:05
         10
         11
                      MS. KRAWICE: Your Honor, is it possible to get an
03:55:08
         12
             extension to file a response to this motion?
03:55:12
03:55:14
         13
                      THE COURT: Is there any objection to an
03:55:15
         14
             extension?
         15
                      MR. BURNAM: Your Honor, this is just the
03:55:16
             submission I discussed with you earlier about our 50(a)
         16
03:55:18
             motion.
03:55:21
         17
         18
                      THE COURT: Right. And when do you plan to serve
03:55:21
             it on the Plaintiffs?
         19
03:55:23
         20
                      MR. BURNAM: I mean, today, yeah. Now. I mean,
03:55:25
             it's filed.
         21
03:55:31
         22
                      MS. KRAWICE: It's filed, but it hasn't been
03:55:32
         23
             served yet.
03:55:34
         24
                      THE COURT: Right, of course. Well, I mean, I can
03:55:35
03:55:36
         25
             tell you this about the post-trial briefing, I'm going to
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expect it to occur very quickly. That won't come as a
03:55:40
          1
             surprise to you all. But we will have a very short fuse on
03:55:45
          2
03:55:49
             when opening briefs will have to be submitted, and I don't
          3
             expect to accommodate extensions once that's done.
03:55:54
                      But with respect to this motion, if there's not
          5
03:55:58
             any objection, you can have an extension as far as I'm
03:56:04
          6
          7
             concerned.
03:56:07
          8
                      MR. FILBIN: No objection. No objection.
03:56:11
          9
                      THE COURT: No objection?
03:56:13
03:56:14
         10
                      MR. FILBIN: No.
         11
                      THE COURT: Very good.
03:56:14
         12
                      All right. How much time would you like?
03:56:15
                      MR. FUSSELL: We haven't seen the motion yet,
03:56:19
         13
             Your Honor. I think it would be premature to --
03:56:22
         14
         15
                      THE COURT: All right. File your motion on the
03:56:25
             docket once you've reviewed it.
         16
03:56:26
                      MR. FUSSELL: Thank you. Thank you very much.
         17
03:56:28
         18
                      THE COURT: Very good.
03:56:29
                      Okay. All right. What else?
         19
03:56:30
03:56:35
         20
                      Closings? Y'all are more than welcome to split up
             your closings however you want. Each side will have 30
         21
03:56:38
         22
             minutes. You all know my practice about using two-thirds
03:56:42
         23
             of your time in your initial closing, and I do expect you
03:56:46
03:56:50
         24
             to open fully on all issues, including damages in the -- in
             the initial closing.
03:56:54
         25
```

03:56:59	1	What else? Anything else?
03:57:01	2	MR. AIRAN: Not from the Defendants.
03:57:02	3	THE COURT: All right. The instructions are
03:57:05	4	agreed at this point, so I would say as long as y'all are
03:57:08	5	here by 8:45 ready to go straight up at 9:00 o'clock, I
03:57:14	6	don't expect any have you all exchanged closing slides?
03:57:18	7	When do you intend to do that, or have you agreed
03:57:20	8	not to exchange them?
03:57:23	9	MR. FUSSELL: We have a 6:30 deadline today.
03:57:26	10	THE COURT: All right. Why don't we plan to be
03:57:27	11	here at 8:30 to address given the trend.
03:57:36	12	All right. See you all at 8:30 in the morning.
03:57:39	13	COURT SECURITY OFFICER: All rise.
03:57:41	14	(Trial adjourned at 3:57 p.m.)
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CERTIFICATION I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability. /S/ Shelly Holmes 10/16/2024 SHELLY HOLMES, CSR, TCRR Date CERTIFIED SHORTHAND REPORTER State of Texas No.: 7804 Expiration Date: 10/31/2025 04:11:16